THE

GENESEE FARMER:

A MONTHLY JOURNAL DEVOTED TO:

AGRICULTURE & HORTICULTURE,

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

FARM BUILDINGS, IMPLEMENTS, DOMESTIC ANIMALS,

FRUITS, FLOWERS, SHRUBS, &c.

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Genesee Farmer.

THE PRACTICAL AND SCIENTIFIC FARMERS OWN PAPER.

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UNDERDRAINING.

In the vast range of agricultural subjects open for discussion, there is none so worthy to occupy the first page of our new volume as that of UNDERDRAINING.

In devising any method for the general improvement of American Agriculture, the necessity of thorough underdraining meets us at the very outset. We can advance scarcely a single step without it. We can obtain only a very slight advantage from a rational system of rotation, from an economical method of making and preserving manure, or from improved processes of tillage, so long as our farms need underdraining. The best of care in fattening cattle—providing warm and comfortable quarters, feeding and watering regularly, and furnishing the best foods in the proper proportions—will be but poorly repaid unless we have first exercised judgment in selecting such animals as have an aptitude to lay on fat. So in adopting improved systems of rotation, culture, and manuring—if we have not a soil free from all stagnant water to commence upon we can not expect the best results. "All this is true; but will it pay?" asks an intelligent farmer at our elbow. This depends on circumstances. If good naturally underdrained land can be obtained in your neighborhood for from $15 to $20 per acre, it would not pay in all probability to expend $30 per acre in underdraining low, wet, or springy land; but in all districts where land is worth $50 per acre, nothing can pay better than to expend from $20 to $30 per acre in judicious underdraining. The labor of cultivation is much reduced, while the produce is generally increased one-half, and is not unfrequently doubled; *and it must be remembered that the increase is net profit.* If we get $15 worth of wheat from one acre and $20 worth from the other, and the expense of cultivation is $10 in both cases, the *profit* from the one is twice as much as from the other. That judicious underdraining will increase the crops one-third, can not be doubted by any one who has witnessed its effects. If it should double the crops, as it often does, the *profit* would be four-fold.

While it can not be said that underdraining will destroy couch-grass, red-root, and other weeds, it *at least* enables the farmer to eradicate them with much greater ease. With our short seasons, it is no slight advantage to be able to plow and sow a week or ten days earlier in the spring, as well as late in the fall; and this desideratum underdraining will accomplish. On grass-land, too, the herbage is not only greatly improved in quality, but it affords an earlier bite. By increasing the temperature of the soil, underdraining induces early maturity; and it is found that, for wheat, it greatly mitigates the injurious attacks of rust and midge, and, for corn, removes nearly all danger from early autumn frosts.

There are few farmers that can afford to underdrain all their wet land at once, but there are none who can not manage to underdrain at least one acre each year. *Let the work be done thoroughly as far as it goes.* The first thing to be provided, is a good main ditch that will carry off all the water. If possible, it should be five feet deep. The importance of a good outlet can not be over estimated. Many of the attempts at underdraining that have come under our observation have failed from neglect of this point. During the rainy seasons, the ditch can not carry off all the water, and the mouths of the drains are submerged, and the whole network of drains is consequently rendered totally inoperative. It is also desirable to have the open ditch pass through the lowest portions of the farm. When it can be cut in a straight line, without deviating too much from the lowest places, it will be best to do so; but we have seen many instances where a main ditch, in order to make it straight, has been cut through high land at a greatly increased cost, and the farmer has afterwards found to his sorrow that it is next to impossible to drain into it.

The depth of the underdraining must be regulated by circumstances. The range being from two and a half to five feet. While tiles continue as high

as they unfortunately are at present, there is more economy in deep draining here than in England; and even there general experience is in favor of deep drains. Deep drains, as a general rule, will drain the land to a greater distance than shallow ones. We are acquainted with farmers in this vicinity who pay $14 per thousand for tiles, and then lay them, in some cases, not over twenty inches deep. This is a great waste of tiles. The same remarks apply to stone drains, which are at least equally expensive.

It has long been a controverted point whether it is best to drain up the fall or across it, but experience and theory alike seem to decide in favor of the former course. When the drains are cut up the fall, the water can get into the drains from both sides; whereas, if they are cut across the fall, it enters only from the elevated land on one side, and of course the influence of the drain extends to a less distance. We are well aware, however, that some of the most experienced drainers contend that when the slope is gradual, the drains are more efficient when cut across the fall.

Had we not seen the opposite course adopted, we should deem it quite unnecesary to say that the proper place to commence cutting the drains is at the main ditch, working towards the more elevated portions of the land. In regard to the proper fall of the drains, all that is necessary is to cut them so that the water will run off freely from the drainers.

When stones are abundant, and it is an object to get rid of them, it may be cheaper to drain with stones than with tiles, though we have some doubts on the point. It is necessary to dig the drains wider for stones than for tiles, and the cost of laying the stones is much greater, while a properly made tile drain is equally effective and durable. Much needless labor is expended in cutting the drains an unnecessary width. One of our popular authors recommends digging drains for two inch pipe-tile, "three feet wide at top, narrowing gradually to the bottom" which is three feet deep. Now such a width is entirely unnecessary. A skillful workman can dig drains three feet deep, only twelve to fourteen inches wide at the top, using a long-handled scoop for removing the loose soil at the bottom.

Our object, however, is not now to give specific directions for underdraining. If we can succeed in inducing our readers to commence on a small scale—to underdrain thoroughly one acre,—we feel satisfied that the results will be so beneficial that they will not give up this most fascinating of all agricultural operations so long as there remains a single wet spot on the farm.

LIME AND ITS CHEMICAL CHANGES.

Lime is not as was once supposed, an *element*, but consists of the metal calcium united with the gas oxygen, and is properly an oxide of calcium, just as potash, soda and magnesia are oxides of potassium, sodium, magnesium. It is never found pure in nature, except occasionally in the craters of volcanoes, but is usually united with carbonic acid, for which it has a strong attraction. In this state it is neutral, and insoluble in pure water. When limestone or any other form of carbonate of lime is exposed to a sufficiently high temperature with access of air or moisture, the carbonic acid gas is driven off, and the lime which remains is called *quick* or *caustic*, from its strong alkaline re-action. When such lime is plunged into water for a short time, or water is poured upon it, heat is evolved, the lime swells, cracks, gives off much watery vapor, and finally falls to a powder. This powder, or slaked lime, is a *hydrate* of lime, water being chemically combined with it. In this state it is still caustic, though somewhat milder than when fresh from the kiln.

The rise of temperature is so great when large heaps of good lime are suddenly slaked, as to enflame gunpowder and scorch wood; it certainly exceeds, accordingly to Pelletier, 500°; and when the operation is performed in a dark place, light is also evolved. All sorts of imaginary causes have been assigned to account for these phenomena. They are referable, however, to a very simple and universal law. All substances during their change from a gaseous to a liquid, or from a liquid to a solid state, evolve heat, and *vice versa*. The intense cold produced by liquifying ice or snow by admixture with salt is a familiar instance of the latter; and the heat evolved in solidifying carbonic acid under intense cold and pressure, is sometimes dangerous evidence of the former—the expansion of air consequent on the sudden liberation of heat from the carbonic acid in the moment of congelation, not unfrequently shattering the vessel to atoms.

Lime in slaking will absorb one-fourth its weight of water; but the slaked lime is not more moist than before. The water unquestionably, therefore, is chemically combined with the lime, and becomes *solidified;* and it is simply owing to this solidification of the water that heat is evolved.

Caustic lime has a strong affinity for water and carbonic acid. When kept in a dry place, it gradually slakes, cracking, splitting and crumbling to powder with the evolution of heat—which, however, is not so perceptible on account of the length of time during which the process is extended—just as

though it had been slaked by pouring on water. In this case the lime has obtained the twenty-five per cent of water it needs to slake it from the atmosphere. There is this difference, however, between *air-slaked* lime and that which is water-slaked. The former is slaked precisely as the latter by the absorption of water, but it also absorbs carbonic acid from the air, and instead of being simply a *hydrate* of lime as when water-slaked, it is a definite compound of hydrate and carbonate of lime, 42.6 per cent of the former, and 57.4 of the latter. *Air-slaked* lime, therefore, is far from being so caustic as water-slaked—upwards of one-half of it being reconverted into the same chemical state as it was in before burning.

After the lime has absorbed sufficient water and is completely fallen to pieces, carbonic acid is absorbed much less rapidly, especially in damp situations. In fact, though there is a constant tendency in lime to return to the state of carbonate in which it existed previous to burning, yet, by mere exposure to the air, it does not attain this state in any assignable time. In some walls 600 years old, the lime has been found to have absorbed only one-fourth of the carbonic acid necessary to convert the whole into carbonate; in others, built by the Romans 1800 years ago, the proportion absorbed has not exceeded *three-fourths* of the quantity contained in natural limestone.

When slaked in the ordinary way, by the application of water, lime falls to pieces without the absorption of but little if any carbonic acid. But when slaked and exposed to the air, the absorption of carbonic acid is at first very rapid, but it gradually becomes very slow, and probably the same definite compound of hydrate and carbonate of lime is formed as in the case of air-slaked lime.

The original limestone, or any other form of carbonate of lime, then, is perfectly mild. By driving off the carbonic acid by heat, we get lime which is very caustic. By slaking this with water, we get a less caustic substance—hydrate of lime. By allowing it to air-slake, we get a still less caustic compound—a definite compound of hydrate and carbonate of lime. And by exposing it to the air for a sufficient length of time, we ultimately get the whole reconverted again into its original mild form—carbonate of lime.

Value of Shelter for Sheep.—Mr. E. Cattell, of Harrisville, Ohio, has tried keeping sheep both with and without shelter, and has come to the conclusion *that it takes from half a bushel to a bushel more corn* to winter a sheep without than with shelter.

CUTTING UP MEAT IN THE LONDON MARKET.

In this country, less attention is generally paid to the difference in quality of the various joints of meat than in England, where some pieces from the same animal command more than double the price of others. In our large cities, however, meat consumers are beginning to discriminate between the best and inferior joints, and the butchers will pay a higher price for such animals as will furnish the greatest proportion of first quality meat. In a recent conversation with one of the most extensive and experienced cattle dealers in the United States, he observed that, in purchasing animals for the Boston and New York markets, the great cause of success or failure is due to the observance or neglect of this point. Many dealers pay the same price per pound for an inferior animal, with coarse, heavy fore quarters, as for one of an improved breed; but when they got them to Boston or New York, they found that the butchers would pay from $10 to $20 more for the latter than for the former, though both were of the same weight. When this matter is better understood, farmers will pay more attention to breeding the best cattle. They will find not only that improved animals mature earlier and lay on fat more rapidly for the food consumed, but that the same weight of meat commands a much higher price.

We have thought a few illustrations of the manner in which carcasses are cut up in the London market, together with the prices usually obtained for the various pieces, would not be without interest to our readers.

After a carcass of beef has been divided by cleaving down the chine into two sides, the division of the side into hind and fore quarters (shown in fig. 1) is a follows:—The spine between the dorsal vertebræ, or links of the back, from which the eleventh and twelfth ribs spring, is divided; and a cut is made from that point nearly square to the spine, but without reference to the direction of the ribs; three of which are sawn obliquely across to a point opposite the shoulder point, and then continued forward to the posterior extremity of the breast-bone; which division of the side into quarters is shown in the figure by the strong line *a*, *b*, *c*. From the inside the bone of the pelvis is sawn through in an oblique direction, and the hind quarter divided into two parts by the line commencing from the *nach* at *d* to a point at *e* above, and a little in front of the hip joint, and afterwards continued from *e* to *b*. The principal division of the fore quarter is into three parts: first, by a line from *g* at the posterior part of the neck, to *f* above, and just behind

the shoulder point, and continued to the point of the breast; and, secondly, by the line from *b* to *f*.

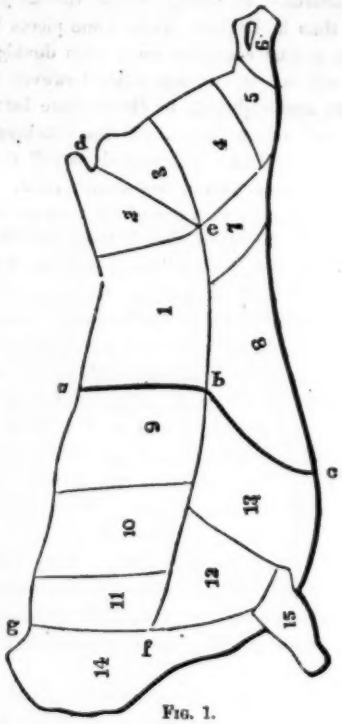


Fig. 1.

The names of the several joints in the hind and fore quarters of a side of beef, and the purposes for which they are used, are as follows:

Hind Quarter.

1. Sirloin, or the two sirloins cut together in one joint forms a *baron*, is, when roasted, the famous national dish of Englishmen at entertainments on occasions of rejoicing.
2. Rump, the primest part for steaks.
3. Itch-bone, boiling piece.
4. Buttock, prime boiling piece for the beef and ham shops.
5. Mouse-round, boiling or stewing.
6. Hook, stewing.
7. Thick flank, which is cut with the cod or udder fat, primest boiling piece, and much used in the beef and ham shops.
8. Thin flank, boiling.

Fore Quarter.

9. Five ribs of the crop, called the fore ribs, is considered one of the primest roasting pieces, and used at hotels, and for large entertainments.
10. Four ribs of the crop, called the middle ribs, chiefly purchased by tavern and eating-house keepers for roasting.
11. Two ribs of the crop, called the chuck, used for secondary quality of steaks.
12. Leg of mutton piece, the muscle of the shoulder dissected from the breast, used for steaks.
13. Brisket or breast, used for boiling after being salted.
14. Neck, clod, and sticking piece, used for soups, gravies, stocks, pies, and mincing for sausages.
15. Shin, stewing.

The following is a classification of the qualities of meat, and also the comparative value by the pound of the several joints of prime ox beef when cut up in the London manner:

First Class.—Includes the sirloin, with the kidney suet (1)—the rump steak piece (2)—the fore-ribs (9), at a current price of 16 cents per lb.

Second Class.—The buttock (4)—the thick flank (7)—the middle ribs (10), at 12 per lb.

Third Class.—The itch-bone (3)—the mouse-round (5)—the thin flank (8)—the chuck (11)—the leg of mutton piece (12)—the brisket (13), at 10 cents per lb.

Fourth Class.—The neck, clod, and sticking piece (14), at 6 cents per lb.

Fifth Class.—The hock (6)—the shin (15), at 4 cts. per lb.

Fig. 2 shows the mode of cutting up a carcass of mutton, as practiced in London. After separating the hind from the fore quarter, with eleven ribs to the latter, the quarters are divided as follows:—Hind Quarter—(1), the leg; (2), the loin: the two when cut in one joint is called the *saddle*. Fore Quarter—(3), the shoulder; (4 and 5), the neck, the part (5) of which anterior to the shoulder called the *scrag* is frequently separated; (6), the breast. The hind quarter usually sells for four cents per pound more than the fore quarter; in fact, many of the butchers at the "West End" deal only in the hind quarters of mutton.

Fig. 3 shows the mode of cutting up mutton in Edinburgh: (1), the leg, or *gigot*, as the Scotch term the joint, includes so much of the loin as lies behind the hook bone, by which the loin (2) is less than in the London mode. The fore quarter is only

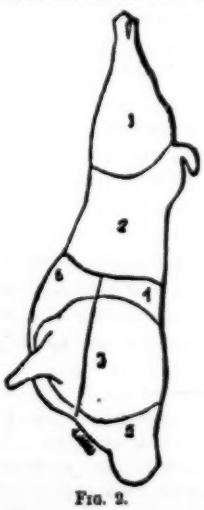


Fig. 2.

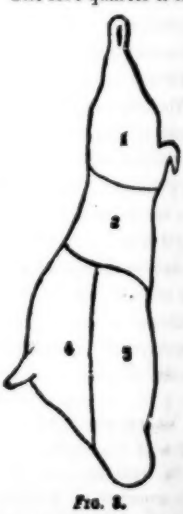


Fig. 3.

divided into two joints, which are (3) the back rib, consisting of the neck as cut in London, and the

upper part of the shoulder; and (4) the breast, together with the lower part of the shoulder.

Fig. 4 shows the mode of cutting up veal practiced in London. The side of veal is divided into quarters, with eleven ribs to the fore quarter, and the several joints into which the hind and fore quarters are respectively subdivided are as follows: HIND QUARTER—(1), the loin; (2), the chump, consisting of the rump and hook bone; (3), the fillet; (4), the hock or hind knuckle. FORE QUARTER—(5,) the shoulder; (6), the neck; (7), the breast; (8), the fore knuckle.—The following is the ratio of prices which the several joints of veal usually command:—Loin and fillet, 16 cents; neck and breast, 14 cents; shoulder and chump, 12 cts.; hind and fore knuckle, 10 cts. per pound. The weights of the several parts of a moderate-sized well-fed calf about eight weeks old, are nearly in the following proportion:—Chump and loin together 18 lbs.; fillet, 12½ lbs.; hind knuckle, 5½ lbs.; shoulder, 11 lbs.; neck, 11 lbs.; breast, 9 lbs.; fore knuckle, 5 lbs.; total of carcass, 144 lbs.

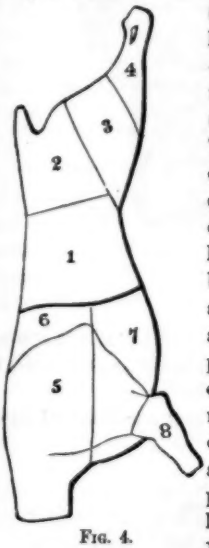


FIG. 4.

Fig. 5 shows the method of cutting up small pork to dress for table in joints. The side is divided with nine ribs to the fore quarter; and the following is an enumeration of the joints in the two respective quarters:—HIND QUARTER—(1), the leg; (2), the loin; (3), the spring or belly. FORE QUARTER—(4), the hand; (5), the fore chine, or sometimes called the spare rib; (6), the cheek. The weights of the several joints of a good pork pig of 32 lbs. may be as follows:—The leg, 8 lbs.; the loin and spring, 7 lbs.; the hand, 6 lbs.; the chine, 7 lbs.; and the cheek, from 2 to 3 lbs.

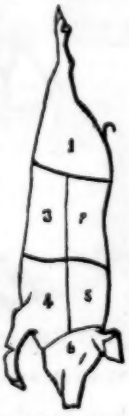


FIG. 5.

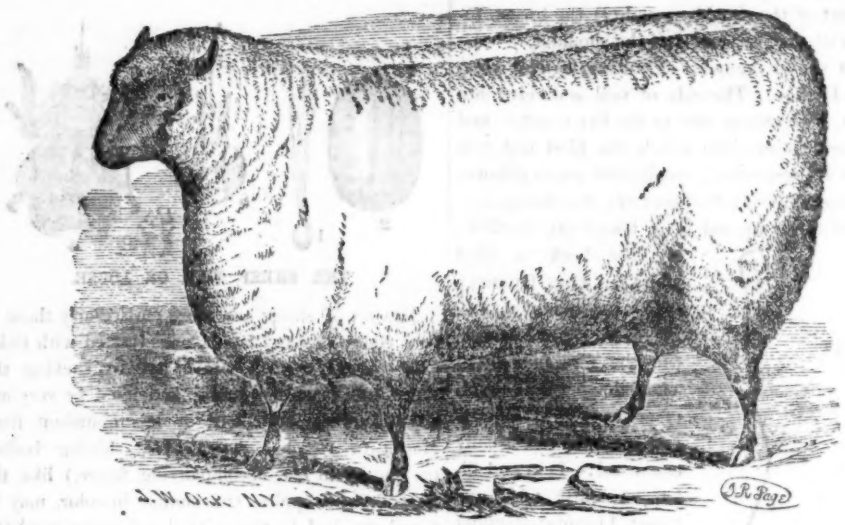
We should be glad if some of our correspondents would furnish us with drawings illustrating the mode of cutting up meat in some of the principal cities, together with such remarks as may induce farmers to breed such animals as afford the greatest proportion of first quality meat.

THE SHEEP TICK OR LOUSE.

NEARLY all sheep, and more particularly those in poor condition, and lambs, are invested with ticks, (*Melophagus ovinus,*) which live by sucking the sheep and especially lambs, and must be very annoying. They are more or less abundant from March to October, when oval, shining bodies, (as shown in the accompanying figure,) like the pips of small apples, and similar in color, may be found attached by the pointed end to the wool (1), (2, the same magnified). These are not the eggs, but the pupæ, which are laid by the female, and are at first soft and white. From these issue the ticks (3), (4, the same magnified), which are horny, bristly, and rusty-ochre; the head is orbicular, with two dark eyes (5), and a rostrum in front, enclosing three fine curved tubes (6) for piercing the skin and sucking the blood; the body is large, leathery, purse-shaped, and whitish when alive, notched at the apex; the six legs are stout, very bristly, and the feet are furnished with strong double claws. A wash of arsenic, soft soap, and purified potash; a decoction of tobacco; train oil, with spirits of turpentine; or mercurial ointment; will destroy ticks.

WEBB SOUTH-DOWN SHEEP.

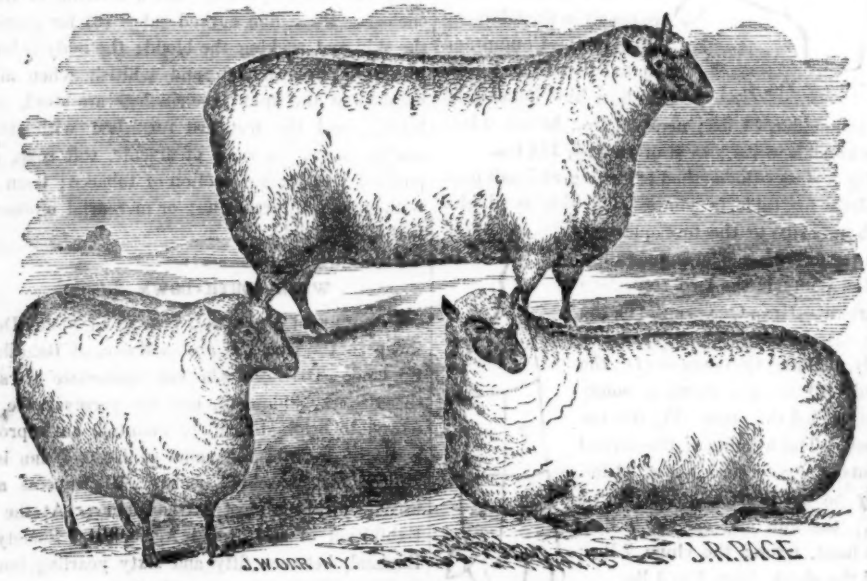
UNDOUBTEDLY, the best breeder of South-Down sheep in the world is JONAS WEBB, of Babraham, England. To those who can appreciate the skill, the care, the judgment, and the perseverance, required to originate and to maintain an improved breed of animals, the name of JONAS WEBB is as familiar as household words. His success as a breeder has been most extraordinary. At the last Exhibition of the Royal Agricultural Society of England, between fifty and sixty yearling South-Down rams were shown. The judges, after careful examination, selected out six. They gave two of them the prizes (£25 and £15), they "*specially* commended" two more, and "*highly* commended" the other two. *All six sheep turned out to be the property of* JONAS WEBB! His annual letting and sale of rams attracts not only the best breeders of



WEBB'S SOUTH-DOWN RAM "FRANK."

Britain, but of America, Europe, and Australia. The prices obtained were years ago deemed speculative, but they are annually on the increase. At the last sale, sixty-five rams were *let for the season* at an average price of $140 each, and one was sold for $2,016. Another ram has *let* in three years for over $2,000, and is still vigorous.

We are glad to learn that our esteemed corres-



THREE WEBB SOUTH-DOWN EWES.

pondent, Mr. J. C. Taylor, of Holmdel, Monmouth Co., N. J., an experienced sheep breeder, has determined to turn his attention to breeding exclusively Jonas Webb's South-Down sheep. In a private letter now before us, (an extract from which we hope he will excuse us for publishing,) he says:—"I have for many years had the inclination to devote my time to breeding sheep. About twelve years ago, I became fully satisfied that, all things considered, the South-Down was the best sheep for

our climate, and for our future, if not for our present needs. From all I could learn, I was satisfied that WEBB's sheep were nearer perfection than any others, and accordingly I procured a few of his sheep from Col. L. G. MORRIS. Three years ago, I put my flock of South-Downs I then had, out on shares, and commenced my Webb flock. At Col. MORRIS's sale I purchased nearly one-fourth of his entire female flock. Last fall, I procured from Mr. WEBB "Frank" and five very superior breeding ewes (one dying on ship). These were secured at a heavy cost, as I wanted the very best for breeding. With the increase of lambs, I have now a fair-sized flock, and one which has cost me a great deal of money and labor."

We have great pleasure in presenting our readers with excellent engravings of "Frank" and three of the four imported ewes, which are undoubtedly model breeding sheep, having been selected by Mr. WEBB himself. "Frank" is half-brother to the celebrated first-prize Paris ram that was hired for nearly $1,000, and afterwards sold for over $2,000. He was the winner of the first prize at the last New Jersey State Fair, and also at the Monmouth Co. (N. J.) Fair.

We hope, and believe, that Mr. TAYLOR will find his enterprise a successful one, and that his "Webb's American Flock" will become as justly celebrated as that at Babraham.

SUGGESTED ITEMS.—No. 16.

FIFTEEN months ago I began these "Items" for the *Genesee Farmer*, and have kept it up, not with all the spirit which should characterize such brevities, yet ever in the hope that your readers accepted my notings with something of the favor with which you have received them. If this be so, I am content. Meanwhile the habit of reading the *Farmer*, pen in hand, has grown upon me, so I must continue scribbling, trusting that the same kind reception will be awarded. Allow me here to disclaim any assumption of superior knowledge, in that I remark freely upon the contributions which enrich your pages. I claim only to be *still learning*, and doubt not that very many who now write for you, could better occupy my space.

Fast wanes 1857, the December number has gone to its readers—these lines greet them in the new volume for 1858. Let not the hard times induce one farmer to practice the mistaken economy of "stopping his papers." They are a *necessity* in this age to the man of progress, and any agricultural paper will pay for itself many times over in the practical knowledge it brings the intelligent reader.

"*Progress in Agriculture*, has undoubtedly been made during the past year, and yet it is too slight to be called *general* progress. In one item, I believe with yourself that the wheat midge will prove a "blessing in disguise"—that its effect is and will be 'to cause us to till less land and cultivate it better to sow only the best portions of the farm to wheat, and enrich them more, while we are underdraining and otherwise improving the low and poor portions." It causes us also "to keep more stock and to make more and better manure," and we are then laying the foundation, at least, for true progress in agriculture.

"*Farmers' Debating Societies*, might well be established in every neighborhood, if those who would aspire to manage them were men of practical aims, instead of wordy and inflated talkers—ready with *theories* on every subject, but with little or no depth of thought. Did you ever notice the character of the questions usually discussed at Debating Societies—how utterly senseless they are?

"*Racks for Feeding Sheep*," and all other domestic animals are the true economy. But we need *shelter* also, and our racks especially should be under cover, for cattle and sheep do not like wet fodder. Racks, sheds, and plenty of straw for litter, are necessary to comfort, economy, and convenience in wintering stock.

"*Good Culture for Corn*," is what brings the good crops of corn. We *must plow deeper* if we want to insure against drouth and wet; and one or the other is always "the reason" why there are so many poor cornfields in the country. "Your large hill of corn, from which you expect two or more ears to the stalk," says Judge BUTLER of Conn., "*must have roots and rootlets to correspond*; and where shall they run for the nourishment required to perfect their growth? *Down*, do you say? Why you furrowed and planted three inches below the surface level, and there are but four left to the plow's floor, and what is that for the rootlets of a *very* large hill of corn? *Laterally*, do you say? You have drawn up to the hills at least half of the seven inches from between the rows, and there is but very little depth or substance for the roots there. There is no other place to go, and when earing time comes, unless your land is *very* highly manured or *very* rich, your ears will not be numerous or *fill out*."

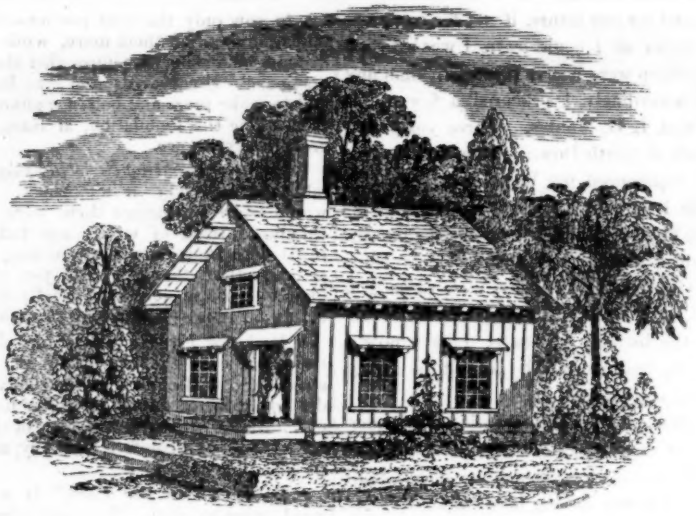
"*Management and Breeding of Sheep*" is not well understood by too many farmers. We do not make them pay half what we might do under the course of management you describe. I hope those whom you call upon "will give their experience to the readers of the *Farmer*," and that mutton as well as wool will be produced and marketed.

"*Care in Setting Trees*" will insure success. But setting trees as one sets a post, is not doing the work either well or successfully. Mr. PARKS pursued the true course, and his letter shows how truly profitable the "right way" ever proves.

"*A Settlement in the Wilderness!*"—How suggestive of "old times" are these familiar pictures. The "Pioneer's Progress" is wonderful, and can never be fully understood by those who had no share in pushing it on. The humble log cabin in the clearing has long since given way to the comfortable farm-house surrounded by spacious fields, and beautiful orchards; and Pioneer life, as it existed in Western New York forty years ago, will never be known again in any country. B.

Niagara Co., N. Y., Dec. 1857.

FARMERS should examine their implements, and put all in good repair needing it.



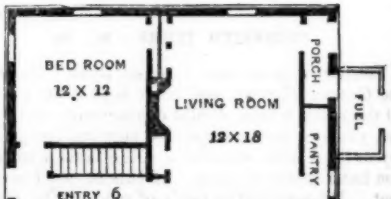
DESIGN FOR A SMALL COTTAGE.

LABORER'S COTTAGES.—FARMER'S WIVES.

EDITORS GENESEE FARMER:—It has been truly said that, "no greater drawback to the comforts and attractions of country life exists, than in the drudgery and discomfort to which farmers' wives and daughters are subjected in boarding and lodging large numbers of *hired men*. Laborers' and mechanics' wives have a comparatively easy life, having but small families to provide for; but the wife of a large farmer, who must supply hearty meals for fifteen or twenty persons at least three times a day, passes a life of hopeless drudgery." No wonder, truly, that "we so frequently see them broken down with premature old age" and that the "young folks" of the farmer's family seek to escape from such a lot. How shall this be remedied, you ask?

Every large farmer should provide small and comfortable cottages so that he can employ married men and have them board themselves. He can then get better hands, and save the frequent changes often necessary, as well as relieve himself of a portion of a loss of rainy days, for such a man could find work about his own premises, when a single man could do little or nothing for his employer. How much more convenient and agreeable to his own family, every farmer can answer, even if he has had but one hired man to sit at his table through the season, and his wife finds a still greater difference in the care and labor required. To the laborer himself it will be far pleasanter, so in the end both parties will be benefitted by the provision of cottages as here recommended and described.

Among the best designs of a suitable character for this purpose, which we have seen, is that shown above, found in the "Country Houses" of the late A. J. DOWNING. It is simple and cheap; and yet tasteful and substantial. The vertical boarding, the projecting roof, the rafter-brackets, and window-hoods, give it a picturesque, home-like expression, at but slight increase of cost, while the trees by which it is surrounded make it appear far more pleasant. The elevation and ground plan need but little explanation. We think the back porch a particularly happy thought—a room opening directly into the open air is often uncomfortable in winter. The wood room might be enlarged at small expense, and if the bed-rooms were required for constant use, it would be well to have it open into the living room, as it would be more convenient as well as warmer in winter. The cellar stairs are under those leading to the chamber, and the latter contains two comfortable bed-rooms.



GROUND PLAN.

The writer first quoted, J. J. THOMAS, estimates the cost of building after this plan at $350, with good cellar, and the walls filled in with brick, while without the cellar and of cheap lumber it could be constructed for $200. We hope this subject will receive attention from those of your correspondents who have given it trial or consideration, for we heartily desire the emancipation of farmers' wives from the slavery of "keeping Irish," or Dutch, or even Yankee "boarding houses." M. HILL.

Oakfield, N. Y.

CURE FOR HEAVES.—Keep the horse one winter on cornstalks; and if you feed any grain, let it be corn in the ear. In the Southern States, where horses are kept exclusively on corn blades (the leaves of corn stripped from the stalk and dried) and corn, heaves are unknown.

NOTES FOR THE MONTH.—BY S. W.

MICHIGAN MANUAL LABOR COLLEGE, AT LANSING.—The first report of the Michigan Agricultural College is out in pamphlet. The inaugural address by the President, JOSEPH R. WILLIAMS, who needs not the prefix Hon. to his name, is a comprehensive and unusually terse, well written exposition of the lack of literary training, and the intellectual disabilities of the agricultural classes; in consequence of which this, the greatest of our industrial interests, is almost ignored by the national government, while commerce and manufactures receive millions for their encouragement and protection?—He says "it is only a few weeks since the United States Senate revised its committees and abolished the committee on Agriculture, thus recognizing no such national interest." But I would ask who can blame the Senate for thus ignoring a class that so tamely consents to its own political nonentity; who is to blame if farmers willingly become the serfs of the soil, satisfied that all they do not know, is not worth knowing? May it not be said that (with many noble exceptions,) the tiller of the soil is less disposed to honor his own calling by claiming for it the necessity of science, than any other man who lives by labor. Even the domestic cook—the maker of savory stews—when clever, is a practical chemist, and claims to be, as he is, an artist; while the farmer clings to hoary prejudices and hereditary recipes, and in his meagre isolated egotism, ignores his own great laboratory of nature's chemistry that gives him his meat and his bread?

President WILLIAMS says "the chief end and object of educating the farmer is to teach him to subordinate himself, and all animal and vegetable life around him, to those inexorable laws, moral and physical, the violation of which meets with swift retribution." Again, "a farmer should be a chemist so far as a comprehension of the principles which affect his daily life and practice is concerned. He need not be an analytic chemist, but he should be familiar with those laws, the observance of which is indispensable to safety and success, and the defiance of which is destruction." The agricultural press should make long extracts from his masterly address. The students are credited so much per hour for their labor on the College experimental farm.

DISTILLERY-FED COW'S MILK.—An M. D. of New York city has lately published a report on the increased mortality of the children of that city—laying the blame mainly to the use of the milk from the distillery-fed cows. The learned *Medico* not only pronounces the milk poisonous, but he scandalizes Analytic Chemistry by the assertion that "chemistry can not detect the poison, hence it is powerless to indicate an antidote." Now every tyro in chemistry knows that distillery slop is boiled meal with a little malt and yeast that have produced a fermentation by which the starch and sugar of the meal was taken off to form alcohol. If such slop is poisonous, the antidote must be sugar, or vegetables containing starch and sugar, such as rations of grass, cornstalks, sorghum in summer, and hay, stalks &c., in winter. Slop-fed cows in this region thus treated, give large messes of milk that affords rich cream; and those city children who fed on such milk here last summer, carried back an accession of bone and flesh and color. The M. D. would have displayed a better practical knowledge if, instead of condemning distillery slops, he had descanted on the abuse of the cows, shut up as they are in narrow, filthy, confined, unventilated stalls, where no other animal but a quiet bovine could live a fortnight, to say nothing of their being fed almost entirely on slop. How much better milk would a cow give, if, under the same confinement, she was fed on potatoes or Indian meal?

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1858.—The title of the first article in this valuable work, "Manures for the Orchard and Garden," by no means indicates the extent of its teachings, its pains-taking and truly practical dissertation on the elements and relative value of manures, and of the manner in which they should be applied both to trees and plants, and how the most wasting and yet the most valuable ingredient in manure, nitrogen, should be saved, &c., &c. Those illustrations, particularly of the trimmed dwarf pear trees, vines, &c., took the attention of a horticultural friend, who, on subscribing for the book, pronounced the article above referred to, to be worth twenty times its cost.

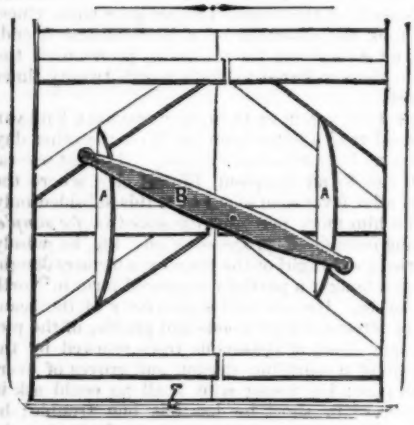
THE ADVANTAGE OF OWNING UNSALABLE VILLAGE LOTS.—I read a letter from the West the other day from a-no-longer-bachelor friend. He went several years ago to an incipient Illinois city, where the speculative fever soon seized him; this subsided only to find him more permanently *seized in fee simple.* Having enough of progressive city life, he wisely married a smart girl of the country, a farmers daughter, and bought a partially improved farm in North Wisconsin. He now writes glowingly of the beauties of alternate wild woods and prairie, of the picturesque effect of deciduous trees relieved by the passage of a sparkling stream, and groves of evergreen pine; his young wife is all he could ask in loveliness; in short he has but one trouble; he can't sell his city lots for money, and of course he has no cash left to hire help to improve his matchless domain, as he now feels it should be improved, and he avers that he has little strength to work much himself. His mother now felt for him, and his sisters in their simplicity sympathised in his dilemma; but a knowing elder brother who had himself lived ten years on a wild farm in north Hoosierdom, comforted them all by saying that "those saleless lots, no matter if they were worthless, were his great blessing, because if they could be turned to cash the money would soon go, and what would be worse, Joe would never learn the use of his own hands to his dying day." He evidently spoke as the French say *en maitre*, for he had *been there*, and he there got that physical education which he now feels is beyond all price to his down hill of life.

MANURE FOR FRUIT TREES.—A writer in the agricultural columns of a New York paper says "trees should be fed with specific manures; as the ashes of the Pear tree contains twenty-seven parts phosphate of lime and twenty-two of potash, the tree in its growing state must hunger for these particular elements, and feeding it with barn yard manure will cause an unhealthy succulent luxuriance wholly unfit to resist the attacks of cold." Just as if the barn-yard manure did not contain these very elements. But the reverse of his theory has been proved by repeated experiments—that the compost

tion of plants afford no index to their manurial wants. Give me enough strong nitrogenous stable manure made by corn-fed animals, and I ask for no inorganic or special manure. It is the injudicious application of farm yard manure, not its quality, that makes it injurious to young trees.

The Past Cool, Wet Season.—This has been a great season for herbaceous plants, very favorable to poor, rolling, or to all well-drained, manureless lands; but I must say that my rich, well-drained garden has yielded better in the dryest of dry seasons, onions and cabbages perhaps excepted. Although the frost kept off until the 20th of October, it was so wet and cool that large Sorghum did not perfect a single seed; tomatoes were late and almost a failure, and Lima beans were a full month later than usual. But I got the largest celery on ground trenched after a crop of green peas were removed. This was my only double crop.

Waterloo, Dec. 7th 1857.



CHEAP BARN-DOOR FASTENER.

Editor's Genesee Farmer:—I send you a draft of a cheap, durable, and convenient barn-door fastener. The doors are of common construction in this part of the country, composed of upright scantling, 3 by 4, arms let in to the scantling and braces to support the arms. A. A. are rockers about 4 feet long, 1¼ inches thick, 3 inches wide in the center, and nailed fast to the braces edgewise. B. lever, which plays on an iron bolt with a head on one end and thread and nut on the other. The bolt is passed through the door and lever and screwed up on the inside. The rockers and lever should be of hard wood. A piece of hard wood board should be spiked on the outside of the door, for the bolt to pass through, and also allowed to lap the other door about an inch. When one door only is required to be open, the other should be fastened with hook and staples, to prevent the wind from banging the door, as is often the case.—A block of wood, some two inches thick, should be bored and slipped on to the bolt before the lever is put on, to keep the lever from slipping up to the arm. You will perceive the upper and lower arms of the door, to which the hook is attached, lap the other door. This is not actually necessary, but, in my opinion, prevents the doors from warping.

Seymour, N. Y. J. C. ADAMS.

Genesee Farmer Prize Essays.

FARMERS' CLUBS.

Clubs, for the discussion of topics connected with the theory and practice of agriculture, have been common for many years, both in Britain and Amerca; and much of the improvement that has taken place in the practice of agriculture, may be traced to their influence.

The object of a farmers' club may be briefly stated, to be the improvement of the members in their agricultural practice, and to afford opportunities of giving and receiving information on all matters connected with agriculture. The meeting of farmers together in such clubs has a tendency to promote a social spirit, and will be the means of making farmers know and respect each other; they will teach them to think more accurately, to act more systematically, and to observe more closely and correctly, in order that they may speak or write more fluently on any given subject; besides, it is very pleasant to spend an occasional afternoon or evening, discussing with our friends and neighbors the subjects that we are best acquainted with, and in which we are all most interested.

One of the first and most obvious obstacles to the improvement of agriculture, or any other art, consists in the ignorance of its practitioners, or in its being carried on by persons who are unable to take a comprehensive view of the principles of their profession, and who have not sufficient curiosity to inquire after the best modes of practice, or understanding to discern the value of any new practice that may be explained to them.

It ought never to be forgotten that the *art* of the farmer is an intricate and extensive one, and one that requires long practice to become a proficient in. One of the chief circumstances which has hitherto retarded its improvement, has arisen from the secluded situation of the persons engaged in it; they are scattered over the face of the country, instead of being congregated in towns, so as to derive aid from each other's experience. Now, if there was a well attended farmers' club in every locality, the experience of *each* might become the property of *all*.

In commencing a farmers' club, the frequency and the places of meeting should be made as convenient as possible to the members; and whether they should meet in a school-house, or some other central place, or from house to house of various members, can only be settled after a club has been established, and by each club for itself. It is of great importance to the prosperity of a club, to choose a Chairman or President—one who is generally respected in the neighborhood—one of tried experience, discretion, and prudence, and who is generally looked up to as a leader in all agricultural improvements; and has the necessary tact to draw out all the information the members present may possess on the subject under discussion; and who, if occasion should require it, can repress (without giving offence) those who may be inclined to take up more than their due share of the time of the meeting.

The officer of next importance to the success of a club, is the Secretary. He will need to work hard himself, as on him will often devolve the business

of sustaining a flagging discussion. He should be empowered to obtain and engage the assistance of all who are qualified to give useful information. It will greatly promote the interests of the club, if, besides keeping the minutes of the club, the Secretary is able to make a brief and condensed report of the views advanced by the different speakers, and publish the same in the local newspapers. By this means public attention is called to the proceedings of the club, and useful information will be spread abroad to the benefit of the whole farming community. We would further state, that the office of Secretary ought to be filled by a practical farmer, as he will thus be best acquainted with the views and feelings, and modes of expression common among farmers; and we believe that every neighborhood will be found to possess farmers well qualified to fill this office, and fill it well, *if they can only be induced to try.*

An excellent plan for conducting a farmers' club, is at each meeting to fix on a subject for discussion at the next meeting, and to appoint one of the members to open the discussion with a written paper on the subject. Having given subjects at stated periods, will not only induce the farmers to think and prepare themselves, but will also tend to elevate their views and feelings as regards farming as a pursuit, and will consequently make them respect themselves and every member of their own class. A very important part of the preparation to be made by those anxious to start or continue a farmers' club, consists in the selection of suitable, useful, and interesting subjects for discussion; as a club will soon cease to exist if its discussions are of no use to the members.

The subjects suitable for discussion are almost endless. We can only indicate a very few of them; each club can determine what is most suitable for itself. On the breeds of horses, cattle, sheep, and pigs most profitable for the neighborhood; the introduction and use of labor-saving implements; the best method of making and saving manure, and the crops to which it can most profitably be applied; the best and cheapest methods of preparing the ground, and the best time for sowing the various crops grown in the neighborhood; the best and most profitable rotation of crops; the best and surest method of eradicating the various noxious weeds that may infest the locality; the profits of draining; the relative merits of good, middling, and parsimonious farming; the best methods of constructing, and the most convenient methods of arranging farm buildings; the root crops most suitable to the neighborhood, and the best methods of their cultivation; the details of dairy management; the relative profitableness, under given circumstances, of the dairy, or grazing for beef. We need scarcely add that no subject of a party—political or religious character—should ever be introduced for discussion at any farmers' club meeting.

It is not fine, set speeches, that are wanted at club meetings, but the practical experience, and experiments, whether successful or not, of the member,—the successful experiments as examples for imitation, and the unsuccessful as warnings to avoid and to prevent others from repeating them.

In conclusion, we would say, that the influence of farmers' clubs will be most beneficial to *young farmers*, as from the discussions of the club the inexperienced will have the opportunity of hearing of the results of practice, and thus be enabled to conduct their labors on the most approved systems. It will tend, too, to make our farmers shake off that lethargy with which they have so long been afflicted, and make them use means to qualify themselves for that position in society which their large preponderance in numbers, and rapidly increasing wealth undoubtedly entitle them to. A TENANT FARMER.

Cobourg, C. W., Nov. 28th, 1857.

HOW CAN WE MOST PROFITABLY AND AGREEABLY SPEND OUR WINTER EVENINGS?

As summer is the season for husbandry, so winter is the season, with the farmer, for mental culture; it is in fact the only time a farmer has for literary amusement or instruction. As a class, farmers are perhaps the most untutored in the community, which is more their misfortune than their fault. While the professional man, the merchant, and the mechanic, are carefully educated for their business, the young man who ultimately becomes a farmer, in hundreds of instances can neither read nor write. The most lamentable indifference is manifested by parents and guardians, to avail themselves of the existing institutions of learning, so numerous and so well sustained.

Is it any wonder, then, that so little taste is manifested by them with regard to literary amusement or instruction? Unable to acquire, theoretically, any information of their business, they are content to go on in antiquated systems a quarter of a century behind the age, satisfied if they do as their fathers did before them, and seeking no progression. If this be true in many instances regarding their farming operations, and unfortunately it is so, how much more true is it in regard to mental occupations. Incapable of amusement from periodicals or books, their winter evenings are squandered away in listless indifference, or under the stupefying influence of the tobacco pipe, or worse still, at the tavern, where, among vicious associates, the obscene jest, the coarse buffoonery, and other demoralizing influences blunt their moral perceptions, and lay the foundation of degraded manhood and premature old age. Now we believe there is no way in which we can employ our evenings so agreeably or profitably, as by reading; and here we would adopt an old maxim—"a judicious friend should choose the books you read." By reading, we do not mean that a man's taste for such should be as voracious as an ostrich's stomach, devouring all that comes in its way; the heaps of novels that are annually "spawned" and published have a most pernicious influence, and can not be too carefully avoided; but what we do mean, is to read a well written non-political, non-sectarian newspaper, and an agricultural paper or two. Here permit me by digressing to say that the method adopted by you of getting farmers to write for the *Genesee Farmer*, thus giving the results of practical experiments, is far superior to the impracticable theories of "agricultural professors," no matter as scholars what their abilities may be. Judicious reading is one of the only amusements that leaves no "sting behind." AURELIUS, the Emperor, used to say he had more pleasure from what he had read and written, than from all the victories he had gained, or all the realms he had conquered; and he

said truly, for it left a cultivated mind behind, instead of weeping widows, desolate orphans, and a wasted country,—the general results of conquest. But the pleasure to a cultivated taste arising from reading, is as open to the peasant as the prince; nay, more so—no vexatious cares of State to annoy, no voluptuousness to degrade, no schemes of conquest or aggrandisement to rack his brain, no wild speculations or visionary projects to disturb him, where is the man who has the leisure or the opportunity a farmer has in winter of amusement or instruction from books? When his day's work is over, seated in his house, surrouded by the members of the family, how agreeably can the evening be employed in reading a good or an interesting book. By reading the histories of other countries, and comparing the moral and social condition of its inhabitants with his own, he is capable of more fully appreciating the privileges he enjoys. By improving his leisure, he may become useful and respected, he will learn his duties as a subject, a citizen, a neighbor, or a parent, more truly, and thus be capable of discharging them more efficiently.

By reading, we can make ourselves acquainted with the choicest thoughts of the most eminent men; we can, as with the fabled wand of enchanters, conjure up the spirits of departed worth; we can make the patriot plead with all his soul-stirring eloquence before us, the lawyer with his accustomed and peculiar sophistry, the philosopher with his profound research, and the pulpit with its sublime and sacred truths; we can see Paul, in all the zeal of his high and holy calling, pleading before Agrippa, or follow him through his many and various wanderings, and listen to the glorious truths he enunciated, and the heavenly eloquence that fell from his lips; or are we in a "lighter mood," we can take the works of the most eminent poets, the sweet and sentimental lyrics of Moore, the plain rusticity of Burns, or the lofty conceptions of the inimitable Byron; while among the numerous poetical works extant, the most fastidious taste can revel to satiety. When we thus make these highly gifted men our companions, will any one say we can make better use of our time than by conversing with them; for when we have their works, any time we read them we are in fact conversing with them, yet how many are there who care but little for the rich intellectual banquets thus prepared for them, and diffused, we were going to say, with a prodigal hand. Were the youth of our country to consider their true position—to consider that the progress of nineteen centuries is in a few years to be handed over to them; that every office of honor or emolument is open to their competition; that from among their ranks must inevitably be selected the very men who will adorn the page of future history, or become profound divines, stand high in the legal profession, prosperous as merchants, or eminent in arts and sciences, or rise to the highest honors of the state—but the idea is unlimited,—were they to consider this, surely they would think preparation necessary, and, youth and leisure improved, would be far, very far, from thrown away.

Let not the farmer, then, spend his evenings in sloth and carelessness, but improve his mind by reading, and he will find it the most profitable and agreeable method of spending his winter evenings.

Goderich, C. W. J. P.

ADVANTAGES OF AN AGRICULTURAL LIBRARY.

The man who guides the plow is no longer a slave—he thinks. He turns up the soil in unquestioning silence no longer—he reasons—he inquires. The sun is to him no longer a revolving meteor shooting through the heavens at the rate of more than three hundred millions of miles per day; the earth is no longer a vast plain, unstudied and unknown. The man who guides the plow is no longer the most deplorably ignorant of all the sons of men; he no longer considers mind-culture, opposed to agriculture. Such has not always been the case; farmers have improved as a class. The cause of their improvement is the reading of printed matter, prominent among which stands that relating to their own pursuits.

The reading of agricultural literature, like the labor of agriculture, is without any contaminating influences. The heart of him who reads of agriculture, is elevated, instructed, and refined. The result may be favorable to the cultivation of the farm, but its greatest value is in the cultivation of the mind. The day when the farmer is ashamed to be an educated man only in "figgers," has passed away; he now has books of his own, papers of his own, thoughts of his own, and libraries of his own; and only supported by him. The day of his abasement is gone. That antiquated annual, provided to tell the changes of the moon, the sun's rising and setting, and the day of the month, is less consulted,—superstition is losing in the number of its slavish followers. The plowman dares to inquire, to doubt, and to reason.

There has been a manifest improvement in the mass of farmers, since our early memory. A change for the better, brought about by the reading of agricultural literature. The agricultural library has its uses as well as the plow. The mind has to be cultivated as well as the broad acres. The library of the man is an index of the man—it shows the currents of his thought—the desires which prompt him and the ambition, the success of which would reward him.—For the great conflict of life, a knowledge of agricultural science is worth more than all that may be added in a college course, and a full knowledge of chemistry is of more value than all the dead languages. The value of the latter is lilliputian, compared with the former; and chemistry is feeble in its claims, compared with strictly practical agricultural literature.

In speaking of agricultural literature, we consider horticulture embraced in the subject. The two comprise the most ennobling subjects to be found within the whole republic of letters. The names of Buel and Downing, untarnished in fame, are written upon our list of men of noble deeds. The laurels won by them are not only recorded by man, but are reproduced in the earths history in annual editions as the seasons revolve by the unchanging hand of the Almighty. Their hearts were such hearts as agricultural literature forms; their love was such a love as their occupation taught—a love of the highest perfection in the creations of God, prominent among which is man. The whole genius of their recorded thoughts is ennobling—appealing to the unsullied and the pure in man.

The influence or the advantages of an agricultural library are beyond mention. Farmers' children

love to read the truths of literature in the description of the birds and beasts of the farm earlier than the word-paintings of fiction. It is not so much the superior cultivation of the farm as of the man, that we claim as an advantage gained by agricultural libraries. We have shown that the farmer has progressed. The truths which should be stored in every farmer's library are the cause of that progression. We care not through what channel it may have reached him—the columns of the newspaper, the agricultural paper, or the address or lecture. The ligitimate office of the agricultural library is the transmission of such knowledge, such man-improving truths, as shall elevate him from the position of the unthinking plowman to the intelligent citizen. The time is at hand when the agricultural library will be the ladder by which the mere man will climb into mind, and avail himself of the labor of worthy intellects gone before. The time is not distant when the farmer will study yet more closely the mysteries of his occupation. We are but witnessing the clearing away of the fog of superstition and prejudice—the symbolical almanac is scarcely dethroned as yet; the result will be when man has put off his superstition. Let it come! Let the light of knowledge shine!

The best way to obtain an agricultural library is by the purchase of books upon subjects that you are interested in. Read thoroughly, and let no preconcieved dogmatical narrow-mindedness prevent you from being instructed. When you have read thoroughly, add to what you have as before. You can buy much cheaper by buying a quantity at once.—You can not get a library of general miscellaneous agricultural literature more cheaply than by taking and preserving such papers as the *Genesee Farmer*. By all means study to improve your mind and business.

JNO. SANFIELD.

Out West, Nov. 1857.

THE BEST METHOD OF DESTROYING RED ROOT.

In destroying this pest of the farm, an ounce of preventive will be found worth *much more* than a pound of cure. A few days' work in the spring, on the clover and wheat fields, will keep it entirely off the farm; and sometimes a day's work given to a slovenly neighbor, for the purpose of getting a field pulled adjoining the farm, will not be thrown away, but will be like bread cast upon the waters. After it has once obtained a foothold upon the farm, you might as well give up trying to *weed* it out; you must stop raising winter grain or clover, and must plant corn or potatoes, or raise roots and spring grain. Pursue this course for several years, and your land will be free from it. The hard, oily nature of the seed will preserve it, in the ground, many years, and when thrown near the surface with the plow in the fall, it will germinate and grow; but if the land is all plowed in the spring, it destroys all that has sprung up, and any further accumulation of seed in the soil, is prevented.

Newfane, Niagara Co., N. Y. C. C. WILSON.

In Germany, it is as common to blanket cows in winter and in wet weather, as it is to blanket horses in this country. This care is well repaid by a greater flow of milk, and a less consumption of fodder.

BREAKING COLTS.

When the colt is two or three days old, his education should commence. A halter and a few moments time at this age will save a deal of labor at a more advanced period. A colt thus early brought to terms, will not entirely forget his teaching, even if allowed to run unrestrained a long time. I once began with a colt at this age, merely catching and holding him a few times, using no halter at all.—He had just learned to be quiet in my hands when I was obliged to stop handling him. When four or five months old he received a halter quietly, and though large and strong, made but little resistance.

The second or third winter the process of bitting should commence.

Procure a bridle with a gag-rein and two side straps, about four feet long, a strong padded girt with a check hook and two buckles about twelve inches from the check hook for the side straps, a back strap and crooper, and you have a *good* and at the same time cheap bitting harness. Dress the colt in this frequently, taking care to keep his mouth sound. Leave the gag-rein quite loose at first, for the colt will find enough to distract him without being obliged to hold his head in a very unnatural position. Many colts are injured seriously by being incautious or unreasonable in this matter. As soon as the colt submits, which he will evince by more orderly behavior, shaking his head and champing the bit, the harness should be removed and the colt allowed to be quiet. By submitting, I here mean merely yielding to the rein as then placed. As he becomes accustomed to the bit, the check may be gradually shortened until his head is brought to the proper place.

The object of the side strap is merely to draw the nose in as the head is brought up, for which purpose they are much better than the martingal, which tends to draw the head down too much.

As you go around the colt during this process teach him not to fear you, and begin to teach him the signals for starting, stopping &c., and by the time, or even before he is well bitted you may with a pair of reins drive him before you at pleasure.—This lesson should be well learned before beginning another. Do not try to hurry matters too much at any stage of the proceedings.

Next put on the collar, and perhaps the whole of the wagon harness soon. If possible have a good reliable horse to drive him with for a time. Drive with discretion according to the age and strength of the colt. It is unnatural exercise and he soon becomes tired. I would not be understood to say that a colt can be worked at two or three years old, but if of good size and well kept, the bitting may be commenced and a *little* very *light* driving be done to advantage as early as the second winter.

Care must be taken not to overload a young animal, or to place him in any position where he will be likely to fail, for in this way balking, kicking, and many other evil tricks are engendered.

At all times avoid frightening him; gain his confidence by every means in your power, and when he fully trusts you, your influence over him will be great. To accomplish this, keep perfectly cool yourself. You will, no doubt, find your patience sorely tried many times, but remember that

your colt has all your requirements to learn, and that without the aid of reason. Never punish until you are sure he understands your wishes, and is determined in refusing to obey; then be calm and firm until he submits.

There is no need of one half the trouble many experience with colts, if they are only treated kindly and firmly.

At least this is my theory, and having tried and found it true in more cases than one, I am inclined to like my plan pretty well. In short, when I have taught a colt his paces thoroughly and he learns that the harness and other accoutrements will not hurt him, I have little fear for the rest as long as I can drive him myself, but take him when and where I please. B.

Fredonia, Chau. Co., N. Y., 1857.

TREES ON THE PRAIRIES.

When we consider that over more than half of the area of the United States there already exists, or will exist at an early date, a great scarcity of timber for all purposes, the importance of our subject will be seen in its true light. At the East, the never satisfied appetite of stove and engine is continually crying, give, give, and every day the supply is lessening, and the demand increasing. At the West, new fires are constantly being kindled, and the stinted growth of timber is failing rapidly.

The question of growing timber for shelter and fuel, must be shortly forced upon us. Why not anticipate its actual coming, "per force," a few years, and consider the only means by which we may evade dire effects? The growing of timber for present use, as shelter, is a present pressing necessity. It is felt in winter, when the mercury is down a score or more degrees below zero. It is felt when the winter wind howls over the prairie like the avenging spirit of a winged demon, the herds and flocks fleeing before it to the grove, from their offered food, like frightened lambs before famished wolves. It is felt when, upon entering within the influence of the grove, the storm-beaten traveler notes the milder temperature. A subject of more importance to half the United States, could not be chosen.

Bleak, cheerless, treeless and uninviting, the wide and fertile prairie stretches away beyond the home-seeker's vision. How often he repeats, "Oh, if here only was a little grove of timber, to protect with its shade in summer, and shield from the winds of winter, I could be content—yea, would be glad to build my home." Any aid which can be given to overcome such inconveniences as these, cannot fail being valuable to the settlers and home-builders of the West. We have made this want of the settler and the means of overcoming it, the subject of study for the last year, and will now proceed to give the result of our inquiries and experience.

The first thing to be observed in growing timber on the prairies, is to prevent the annual visit of fire so common in autumn and early spring. Soon after the fires cease, different varieties of timber early spring up, and make usually a rapid growth. But it is from artificial means we hope for the most in the growing of timber. And of these we consider propagation by cuttings the most expeditious and certain mode. Of these the Golden Willow and Cotton Wood, natives of every prairie grove, and the rapid-growing Poplar—always keeping pace with civilization—are quick growing and easily propagated varieties, suitable for either shelter, ornament or fuel. They grow well from cuttings, and are as easily propagated as the currant. They will make a growth of two feet in circumference in from six to eight years, and the willow throws out an enormous branching top.

The Poplar is a tree frequently found growing about old homesteads at the East. It makes a very rapid growth—is clothed with limbs from near the ground to the top, which shoot out from the trunk unlike the branches of other trees, keeping close to the parent trunk, and frequently seen dead and living, interspersed all along up the tree. The trunk maintains its size to considerable height, apparently little diminished by loss from branches. It grows readily from cuttings, and I have seen good shelter-ing fence growing of it which had been stuck but few years.

We wish we could urge upon every prairie farmer the importance of planting—planting—continually planting, or sticking down slips or cuttings of these trees. In addition to these, the locust is an important tree, and its wood is second in value to none other grown in our climate. Every Western farmer should gather liberally of the seeds of this tree, and scatter them with no sparing hand. They grow readily, and but a few years are needed to produce a grove of locust trees large enough for fence posts and fuel.

The Black Walnut is another variety worthy the attention of farmers, and they should seek to grow these valuable trees, not only for pleasure, but clear profit. They grow vigorously when in favorable locations, and the fruit with which they are annually laden is a good argument, if none other existed, why they should be grown. Other trees there are deserving of attention, but none of them so rapid in growth and so easily cultivated, as the first named in this article.

We have not yet said enough of our favorites of the list above given, viz.: The Willow, the Cotton Wood and the Poplar. We fear that any variety of timber not easily and rapidly grown, will fail to meet with that attention which the subject demands. Hence, we again speak of cuttings, and urge upon every farmer the growing of these by the roadside, in the fieldsides—everywhere, where man passes, or where he or the brute creation may want them for shelter or fuel. For ornament, the two first named above, when grown from cuttings, with plenty of room, are second to few much more applauded trees.

Plant them, or rather stick them with crow-bar and mallet, about your cattle yards, your lawns, and your line fences. Stick them where it is too dry to grow grain, and too wet to grow grass.—Stick them anywhere and everywhere, only so you keep multiplying their number, and hastening the "good time coming," when we shall have the prairie dotted with the eye-gladdening sight of growing trees, and these shall be unlimited evidence, increasing with each rolling year, that we are in earnest in the work of planting trees. JNO. SANFIELD.

Out West, Nov. 26, 1857.

SHEEP ON THE PRAIRIES.

The keeping of sheep on the prairies, has thus far, when undertaken, been conducted in a slovenly and unfarmerlike manner. Wool growing has not yet received that attention which it deserves as a distinct branch of business, at the hands of the prairie farmers. The same inconveniences exist here that do in other places in the same latitude, except the difficulty of providing food, which, in any tolerable locality here, can be done with little expense. Sheep will be subject to the same degree of winter's cold, rendered more severe on the open prairie by the unbroken winds — which no animal can well endure. The summer is usually hot and dry, being well suited to the wants of the sheep.— Well sheltered from the winter winds by sheds, and as carefully tended as at the East, the raising of sheep cannot fail to succeed as a business, with less expense than at the East.

The keeping of sheep on the open prairie, is rendered more difficult than it otherwise would be, by the existence of a law, in this and other Western States, allowing cattle and horses to run free, but obliging sheep to be kept in fenced pastures or watched if running on the open prairie. This is in consequence of the grain fields being generally surrounded with a fence which sheep could go under without difficulty. But many ample sheep pastures could be selected where no expense for fencing need be incurred yet for many years, by the flocks being guarded at night and taken to their pastures early in the morning.

In consequence of the law above mentioned, few sheep are kept by farmers, as it is difficult to carry on a mixed husbandry, embracing grain growing— the great business of the Western farmer—and cattle growing, at least enough to supply the farm, with the high prices for and scarcity of help which has been experienced for the last few years.

To keep sheep in large numbers upon the open prairie, a shepherd would be necessary to keep under his supervision the different flocks, and see that each was cared for and in its proper place.

Winter sheds can be constructed at no great expense, of posts, fence boards and prairie hay of the coarser kinds, or straw, of which an abundance can be had for the drawing. Large pastures can be enclosed with wire fence at no great expense, which is amply sufficient to stop sheep, and is coming into more and more general favor for common farm fence.

We consider the reasons why sheep growing has not been entered into as a distinct branch of business more extensively than it has, to be — First: That money has been bringing such high rates of interest as to give little promise to capitalists of anything paying better. Second: The speculation going on in real estate, has served like the "ignis fatuus" to blind all eyes to any other source of gaining wealth; and — Thirdly: That the growing of grain has been so remunerative as to satisfy the desires of the farmer, and attract all his capital and attention. These, and no lack in the profit of the investment, are the causes why farmers here have not made of sheep and wool growing a distinct business, as we hold they might, with as good or better results to themselves than from the growing of grain, where it has to be transported at half its value to a distant market.

Sheep growing, thus far, has not developed any stubborn disease to which the sheep is more subject in this locality, than at the East. They need not be obliged to run upon low, swampy ground, any more than there. The upland prairie, when closely fed with sheep, soon grows white clover, of which it produces quite luxuriantly.

The wool and mutton markets are usually quite brisk, and, from inadequate supply, frequently equal the Eastern prices. JNO. SANFIELD.

Out West, Nov., 1857.

KEEPING DAIRY COWS THROUGH THE WINTER.

In keeping dairy cows in cold weather, the first thing is to provide proper shelter from the frosts and storms of this inclement season. We all know that it is poor economy to feed cows from stacks in the open field, and leave them exposed to the storms and winds of winter. It will take nearly one-third more hay to keep up the animal heat, besides what is wasted by being trampled under foot. This makes quite an item in economy; but feed them as you will, they will come out poor in the spring, and consequently will not give more than three-fourths as much milk as if in good condition. But many that stable their cows do not gain much in consequence of crowding them too thickly together, and fastening their heads tightly between upright stakes or boards, or by having poorly constructed racks or mangers, and suffering them to lie in their filth.

If cattle are fastened too closely together, they hook and tease each other, besides robbing each other of their food. They should have sufficient room to stir. A stable thirty feet long, will make nine stalls; it should be twelve feet wide, including mangers. The mangers should be made of plank, twelve feet in depth and width. The stalls should be what I call half-stalls, dividing the mangers and reaching back to the middle of the cows. This will prevent their hooking or scaring each other, and leave room to milk them. Behind the cows, the floor should drop three inches. The mangers should be scooped out where the cow's necks come. In front they should be boarded up tight, except a space eight inches wide six inches from the floor.— The floor should be wide enough to allow of feeding tables, three feet wide, made in sections of ten or twelve feet, and fastened with hinges at the bottom and let down to a proper angle, for the hay to slide down, as the cows pull it through. When not needed, the tables can be tipped up and buttoned. This plan succeeds well. The cows pull the feed through as they eat it, and will not hook it about and waste it. One can put in straw and they will eat it very well, thinking that something better is beyond their reach. The cows should be fastened by a strap, rope, or chain, around their necks or horns, and fastened to the manger.

So much for stables; and the reason why I say so much about them is because they are so often poorly constructed, if made at all. As for feed, I think that in a dairy country, hay is the cheapest for principal food, although some roots may be raised and fed to advantage. If one has a large quantity of straw, it is good economy to feed it to cows; they will not eat it up clean, but what is left will make good litter; and the cows will need some grain to do well. After all, hay is the main thing to depend on, and should be fed in small quantities

four or five times a day, and then it will be eaten up clean, and the cows will thrive and do well, if well taken care of. They should be kept clean, and only turned out in cold weather long enough to drink. Towards spring, they should have a little meal or some bran, every day, to have them in good condition when they come in.

Java, Wyoming Co., N. Y. ANDREW J. TAYLOR.

CANADA THISTLE.

The Canada Thistle (*Cnicus arvensis*) is one of the most troublesome weeds on the farm, and any cheap and easy method of destroying it would be a great boon to farmers. It is a perennial plant, with long creeping roots, by which it easily spreads itself, and is so tenacious of life that when it once gets possession of the soil, it is a work of both time and labor to subdue it.

As prevention is always better than cure, every farmer should prevent, as much as possible, any thistle from growing to seed, as Nature has furnished the seed with plumes, by which the wind carries them over a whole neighborhood. It is this in part that renders the thistle so difficult to subdue, as no matter how careful our farmers may be, if his neighbor allows thistles to go to seed, they will surely find their way all over his farm. The most feasible means, therefore, of ridding a whole neighborhood, is carefully to prevent any from going to seed.

A principle affects the vitality of weeds that ught never to be lost sight of in attempting their destruction; and he who practices it will infallibly prevent their coming to maturity. The elaboration of the sap is effected by the leaves of a plant, and it is the elaborated sap that enables it to sustain its existence. By preventing the development of the leaves, and consequently the elaboration of the sap, the life of the plant will be sacrificed. The simple plan, therefore, of destroying the thistle, (and all sorts of weeds, is to deprive them of their leaves as soon as they appear. When this can be done, the weeds will soon be destroyed.

On land that is overrun with thistles, if well adapted to the growth of fall wheat, we would give it a thorough summer following—plowing four or five times in the course of the summer, as often as they showed themselves green above ground—stirring the soil frequently in dry weather, for the purpose of destroying their roots—every inch almost of which will grow. This is not a matter of easy accomplishment, but is absolulely necessary to the destruction of the thistle. After taking a crop of wheat, we would seed down the land to clover, and the first season after would mow it twice, once say in the end of June, and the second time for clover seed as soon as ripe. This method will in most cases destroy the Canada thistle, but care must be taken that the land is afterwards kept in proper rotation and regularly seeded down, else they might soon show themselves again. But there is much land covered with Canada thistles on which fall wheat would be an uncertain crop—in fact, on which it could not be sown with any prospect of a crop. This class of land we would *fallow with a green crop*—of Swedish turnips, Carrots, Mangold Wurtzel, Potatoes, or with Indian corn. These will need careful hoeing. Never allow the thistles to show themselves above ground. This method we have found very effectual when carefully done—the Swedish turnip (ruta baga) leaving always the cleanest ground,—and then seed down the land to clover with the ensuing crop. In seeding down land that is troubled with thistles, it is of importance to make the surface as smooth as possible, so that the scythe or mowing machine may cut as close to the ground as possible, as the nearer the ground the thistle is cut so much more certain will be its destruction. If mown for two or three seasons, it will be long before they are troublesome again.

On all grass land or ground that can not be plowed, if the thistle is carefully cut for a few seasons they will disappear. Any very bad patches may be sown with salt, which will help to ensure their destruction.

We have often read and heard of easy methods of killing the thistle, such as certain days of the year, or certain stages of the moon; but we are afraid that, like learning, there is no royal road to the destruction of the Canada thistle, as when they once get possession of a farm they require much labor to get them out, and constant watchfulness to keep them out. One great cause of their having overrun the country so much, is the constant cropping of land without any regular rest or rotation. Were all farming land regularly fallowed and seeded down, and proper care taken to cut all thistles growing on waste lands—road sides and corners of fences—the Canada thistle would cease to be that very troublesome noxious weed on almost all long-cleared farms that it now is. W. R.

Osbourg, C. W., Nov. 28, 1857.

THE BEST METHOD OF PULVERISING A HEAVY CLAY SOIL.

The best method of pulverising a heavy clay soil, in order that it may be good for cultivation, is: first, make it dry, either by an open drain along the upper side or head land and down two sides to some outlet below, or by underdraining, or both; and then, if there is any swamp muck or boggy lands accessible, give it a deep coat therefrom, which can be done to good advantage if the owner has both kinds in his possession on the same farm; for in order to reclaim the boggy land, it needs heavy clay, and, therefore, when a load of bog is drawn up from the swamp, take down a load of clay; and then no time is lost. And as the bog needs a ditch to take off the stagnant water, just exchance what comes out of the ditches. But if neither bog nor swamp muck can be obtained, let the first direction be kept in view, namely, the ditching of the field; then let plenty of rough manure,—the rougher the better—be applied, and if deep plowed, a good quantity of proper burnt lime. The lime should not be more than half burned. My reasons for this are the following: If a heavy coating of well burned lime is applied to land, it is mostly injurious to the first crop, whereas lime with core in it does not all dissolve the first year, but every year it sheds a new coat off the core and sinks further into the soil until it is all spent, and thus enriches the soil, still pulverizing as it goes, and by thorough cultivation makes a rich productive soil. But lime should never be applied to land as a fertilizer, unless it be either naturally dry or well drained. H. RAISEY.

Coltfield, Mercer Co., Pa.

WHAT ARE THE BEST PASTURES FOR DAIRY COWS?

There are few subjects of more practical importance to the country generally than that of the best pastures for dairy cows. The great and rapidly increasing interests of the dairy business of the country make it a question of moment as to what are the most valuable grasses with which to stock our pastures. It must be confessed there has been, and is yet, a great want of interest in the subject. Most farmers seed with Timothy and clover, without a thought whether there is anything better. It is generally admitted that Timothy makes the best hay, and clover is one of the best plants for renovating the soil; but Timothy will not bear close pasturing, and clover is not well relished by most kinds of stock.

Charles L. Flint, of Massachusetts, has lately written a book on The Grasses and Forage Crops of America, which contains much valuable information. From that we gather that the most successful farmers of Europe and America have found it profitable to seed with a good many kind of grasses, so selected as to have one or more in perfection in each month, thereby keeping up a succession of feed, which can not be done where only one or two kinds are sown. He recommends for permanent pastures, Meadow Foxtail, two pounds; Orchard Grass, six pounds; Hard Fescue, two pounds; Fall Fescue, two pounds; Meadow Fescue, two pounds; Italian Rye Grass, six pounds; Perennial Rye Grass, six pounds; Timothy, four pounds; Redtop, two pounds; Rough Stalked Meadow Grass, three pounds; Red Clover, two pounds; Perennial Clover, three pounds; and White Clover, five pounds; forty-five pounds in all. But to jump from only one or two to such a profusion of grasses, is asking more of most farmers than they will undertake. Yet if they can not obtain such a multitude of kinds, they can, at least, and those who are most awake to their interests will, stock the pastures for their dairy cows with Orchard Grass, June Grass, or Kentucky Blue Grass, Timothy, Redtop, Clover, Italian Rye Grass, and Sweet-scented Vernal Grass. Of the Orchard Grass, Mr. Flint, Judge Buel, Judge Peters and Colonel Powell say it is one of the most valuable of pasture grasses, even taking precedence of the far famed Blue Grass. Of the June or Blue Grass, it need only be said that the cattle always keep it gnawed close where they have access to it. Italian Rye Grass is a very gross feeder, but not as nutritious as Timothy, yet it is considered one of the best of grasses for soiling. Vernal Grass produces but a light crop, and comes to maturity early, and is chiefly valuable for the delicate flavor it imparts to the butter of cows fed upon it. Another reason for sowing a greater variety of seeds is that the earth is not as soon robbed of any one of the constituents of plants, as it is where only one kind of grass is grown. And again, if only one grass is sown, there will always be spots where that kind will not grow as well, and those spots are very apt to produce a crop of weeds or foul grass; yet those very places would be just such as some of the other valuable grasses would delight in.

But we want carefully conducted experiments to determine what and how many kinds of grass are best for cows. Who will undertake this and report to the *Farmer*.

L.

Lynn, Pa., December, 1857.

BREAKING STEERS.

In breaking steers, one of two things is necessary—that the operator begin before the animal has strength enough to be unmanageable, or when he does begin that he put him where he cannot get out from under his control. Any trick allowed at this time, or advantage given, will soon become a confirmed habit. The formation of bad habits should be studiously guarded against—young steers will learn in one day what much aftercare can hardly break them of.

The best way to break steers to the yoke, is to take them in the beginning into a small well fenced yard, from which they cannot escape, and keep them as much under your power as you would a horse, driving them about the yard without the yoke, until they are wearied enough to have it put on them without opposition. After they are yoked, keep them going—unyoke and yoke them until it can be done handily, and when you leave them, chain or tie them so they cannot move from the spot, that they may learn to stand when left at any time. As soon as you can drive them where you like in the yard without trouble, you can do so out of it.

To break steers in this manner, usually consumes four days, so as to be as work-worthy as by the old method, in two months; and one man can keep two or three pair on the drill about as easily as one.

Steers trained to the yoke in this manner, retain more of their sprightly native character and disposition—move quicker—and if well managed, are more docile and valuable when oxen. We would as soon think of putting a young boy into difficult calculations in higher mathematics to learn arithmetic, as to put steers to labor without previous drilling and training.

W. H. GARDNER.

Hornby, Steuben Co., N. Y.

RAISING, GATHERING, AND CLEANING CLOVER SEED

Raising clover seed, is always done after the first crop of hay is taken off. If a field is well set with clover, it is generally left to lay for a second crop if it can be spared; and if found that it contains seed, it is mowed for the seed. In this section it grows mostly too rank, and it is but seldom that it contains much seed, particularly if a wet season. The best method of gathering clover seed yet discovered in this section, is by the use of a Reaper, the same as for cutting grain; with a fork or rake take it off the platform, whenever there is enough to make a small heap. The heap can be set in rows if properly managed. The reaper can be set low and straw and all cut, or high and the heads only will be lopped off, which will save a great deal of labor, and also leave the straw on the fields as manure. The crop should be left out till so dry that the seed will shell well. It should have at least one or two weeks good weather, before it is taken in the barn or put on stocks. To thresh the clover, put it through a threshing machine, with a long shaker attached to it, and what falls through it is preserved, and contains the seed. The best and quickest way to clean the seed is by the use of a huller and separator made expressly for this purpose. It should then be sieved with a sieve expressly made for the purpose.

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Enterprise, Lancaster Co., Pa.

THE BEST TIME FOR CUTTING THE VARIOUS KINDS OF GRAIN.

The cereals, together with other vegetable matter, are composed of organic and inorganic elements. Of the latter, it is not now necessary to speak.—The organic matter is divided into nitrogenous and non-nitrogenous substances. Gluten, gelatine, fibrin, albumen, casein and legumen, are the principal compounds in which nitrogen or azote are found. Sugar, gum, starch, mucilage, woody fibre, &c., are the non-azote principles. The azote principles form the muscular substance of the animal body, and the power of a plant to sustain animal life is just in proportion, to the amount of these principles which it contains. The non-nitrogenous principles form the fat and help to keep up the heat of the animal body. These various principles are all only different combinations of the gasses, carbon, oxygen, hydrogen, and nitrogen, which the plant obtains from the earth, water, and air, and are elaborated by the growing plant until it finally forms the seed or grain. Therefore, as the whole organic part of the plant is formed of so few principles, and as it is evident that there are constant changes taking place in it while growing, the question is, what is the proper time to cut short those changes, in order for the husbandman to reap the greatest profit from his labors? In other words, at what time does the plant contain the most gluten, albumen, fibrin, &c., and least woody fibre, &c., and so of course contain the greatest proportion of life-sustaining matter.

Now, it is found that plants form sugar, woody-fibre, &c., very *rapidly* towards the *last stages* of their growth, and the opinion is held by many of our best farmers that wheat, in particular, contains less albumen, &c., when dead ripe, than while it is in the doughy state, but more starch, woody-fibre, &c. Now, as these last principles are of much less value, in the animal economy, than the former, it is of course wisdom to cut grain in the dough state. I am not aware of any experiments to test the truth of this opinion, yet general impressions are often correct, and I believe this one to be.

Buckwheat ripens so unevenly, that, if the weather permits, it pays best to let it stand until the last blossoms are brown. G. C. L.

Lynn, Susq. Co., Pa., 1857.

MANAGEMENT OF PERMANENT GRASS LAND.

Much difference of opinion exists among farmers on the management of Grass Land, and especially of Land that is to remain in grass permanently. In this article I shall simply give my views, which are the results of some eleven years experience and observation. If the land is designed for pasturage, let the fences around it be made good every spring, and at any other time that they may by accident get out of repair. The pasture should be cleaned of all stones and stumps in order that the whole surface may be available for grass. Stock of any kind should not be allowed to go on very early in the spring or late in the fall lest the sod be stamped and cut up badly with the feet of the cattle and horses, and made much less productive than it otherwise would be, and also that in the spring the grass may get well started. A good manure for pastures is plaster sown broadcast in the spring; this, with the droppings of the stock will greatly increase the quantity and quality of the grass. For a permanent meadow, the directions previously given in reference to fences and removing stones, stumps, &c., should be observed. Do not allow stock to pasture on the meadow at any season of the year, for it injures meadows very much to be eaten down by stock and the surface will always be injured more or less by being trodden by animals at any season. Most kinds of manures can be applied with profit, but do not neglect to sow broadcast one or two hundred pounds of plaster per acre every spring as soon as the fifteenth of April, if practicable. In the spring the meadow should be thoroughly rolled as soon as it is dry enough to allow the team to walk on it without stamping up the surface. Every year if possible, and certainly every second year after the crop of hay has been harvested, or, as soon as the first of September, let there be drawn twenty-five or thirty cart loads of barn yard manure, compost from the compost heap, or leached ashes, and evenly spread over the surface of the meadow. This application or top dressing will cause the grass to spring up and be much more thrifty than it otherwise would be, and the grass and manure will furnish a good protection for the roots of the grass during the winter. Meadows thus managed will improve every year.

Hickory Bluff, N. Y. BEE.

CUTTING AND CURING CLOVER FOR HAY.

I cut my clover as soon as the first blossoms begin to turn brown; 1st because the blossoms at this time contain a large amount of saccharine matter adapted to the purpose of generating animal heat, forming fat, or producing butter. 2d there is less indigestible wood fibre in the stalk than after the formation of the seed. Do not cut it when wet either with dew or rain; it costs more time to dry it properly, and the evaporation seems more to injure clover than any other kind of grass. Let it lie in the swath until wilted on the top; turn the swath directly over, let it lie a couple of hours, then put it into very small cocks; if the weather is very favorable it may stand over the next day, but by all means avoid being wet with rain. On the day I get it in, slightly open the cock, turn up the bottom to the sun and it is soon ready for the barn. I prefer a scaffold, and pack it as lightly as possible.

In 1856 I milked several cows in the spring. They were fed two quarts of Indian meal per day each, and as much Timothy hay as they would eat. I then fed clover cured as above for one week, got one-third more milk, twice as much cream, and of better quality. The next week fed Timothy hay—milk and cream as at first. I then fed clover hay with the same result as before. The same change was made several times in succession with the same result.

Last winter I fed about seven tons of clover hay cured as above without any grain,—cow gave abundance of milk, horse grew fat, and colt continued to grow through the winter as fast as through the summer before.

Clover cut after the seed is formed is nearly valueless as fodder, as all who have tried it well know. Clover as well as other hay is often "dusty." This I apprehend is owing to its not being entirely free from water when placed in the mow.

Marathon, Cort. Co., N. Y. ALONZO QUINN.

ADVANTAGES OF CUTTING GRASS OR GRAIN BY MACHINERY.

The superiority of the modern system of cutting grass and grain by machinery, over the old way of using the sythe and cradle, is very great: for, in the *first place*, it is a saving of *time*. During the season of harvest, every moment is precious, and an economical use of the fleeting hours, should be sought after by every farmer who would be successful in securing his crops *well*. We will suppose two farmers—A. and B.—have each six acres of grass to cut for hay, and that A. practices the old method of cutting with a sythe, and B. uses a mowing machine. As it will take no longer to haul one lot of hay into the barn than the other, after it is "made," (supposing the distances to be equal) we will take the *making* only into consideration, and see how much *time* can be saved by the improved method of cutting.

Farmer A. and his two hired men commence mowing with their sythes in the morning, and continue until ten or eleven o'clock, when they must stop and shake it out to dry. As soon as this is completed, that which was first shaken, will be ready to turn. It must then be raked into winrows, and afterwards put into small cocks, which will occupy the remainder of the day. In this way, they can cut and make into hay, an acre and a half of grass, which, I think, is a very fair estimate. At this rate, it will take them *four days* to make the six acres.

Farmer B. commences his also in the morning with a good machine, and by sunset his grass is all down. His two men can be occupied at other work on the farm until ten o'clock, when they can commence *turning* the grass which was first cut. By two or three o'clock, one of them can commence raking with a horse-rake, and the other put it in cocks, until four or five o'clock when the raker can also go to cocking. In this way, two acres and a half may be prepared for the barn on the first day.

The next day, as soon as the dew is off, the three men can commence turning what is still left on the ground, and as soon as this is completed, one of them can rake, while the other two put it up, and at the close of the second day the six acres may be completed. The weather is supposed to be good and the grass also. And I think the comparison is a very fair one, as I am pretty well acquainted with both the systems. Thus, *one half the time* is saved.

It is also a saving of labor; for one man and a good team will cut as much grass as six or seven men with sythes; and they may be employed at work which is *far* less wearing on the system. But time and labor are money. And supposing wages to be $1.25 per day;—if half the time of three men (or two days) can be saved, it will amount to $7.50. And supposing the six acres *must be cut in one day*;—the wages of the five extra hands will amount to $6.25; or, the saving of both time and labor, for only six acres will be, according to the above estimate, $13.75. Where a farmer has ten, twenty, or thirty acres of grass to cut, a mowing machine will soon pay for itself.

But these are not the *only* advantages. It is frequently almost impossible *to get* good hands, and sometimes even in localites where they are generally plenty. So that nothing *certain* in this respect can be depended upon. It is therefore a great object to be able to get along with as little extra help as possible.

Nor is this all. For we can neither make it rain nor shine; and hay must be made, and grain cut, when the sun *does* shine. We sometimes have a week or two of good weather at the commencement of harvest, and then have rain every day or two for a month. The farmer who can take advantage of this pleasant weather, and get twice as much done as his old-fashioned neighbor, must certainly feel, as he sees all his hay and grain securely stored away, while his neighbors' is being ruined with the soaking rains—that his mower and reaper is worth two or three times its cost.

But let us take a peep into the respective kitchens of farmers A. and B., and see what the other sex are doing; for he who cares not to see a wife, daughter, or sister, weary and toiling with *unnecessary* labor, should look well into his own heart, for he will there find a great void which should be filled with an affectionate mercy for those whom God has placed beneath his care.

In the kitchen of farmer A., everything is hurry, bustle and confusion. They have eight or ten extra men to provide for, and accordingly an extra quantity of bread and pies must be baked, an extra sheep or shoat, must be dressed and cooked, an extra quantity of vegetables must be prepared; and tea, coffee, dish-washing &c., be increased in the same proportion. *They dread harvest.* A farmers' life appears to them a life of *misery*; and who can wonder?

But farmer B. can get along very well with half the amount of hired help, and of course the labor in the kitchen is greatly reduced. They have more work than *usual*, to be sure, but everything goes along smoothly and pleasantly. A great amount of food is saved, for the mower and reaper, and horse rake, *do not eat.*

To sum it all up,—*half the time* may be saved, and a much larger proportion of hard labor. The farmer is not obliged to procure a great number of extra hands, which is frequently very difficult to accomplish. The female part of the household are saved a great deal of laborious work, and much less food is consumed.

So that if a mower and reaper *does* cost an hundred and twenty-five or fifty dollars, the amount which will be saved on a large farm in four or five years, will much exceed that sum.

Salem, Ohio. DAVID STREET.

THE BEST TIME TO CUT TIMBER.

The best time to cut timber I believe to be while the bark will peel readily, and just before it gets tight. The sap of the tree is then elaborated into wood, and consequently the wood is dryer, while heat of the summer soon seasons peeled logs, or rails. Whoever has tried peeling saw logs in summer, has found them easier to handle the next winter, and the timber much less liable to rot.

Again; timber cut and peeled in July or August, will never powder-post. I have been told by shipbuilders that August is the best time to cut oak for ship-building, and have seen Linden rails in Illinois, said to have been made nineteen years and perfectly sound. They were cut and made in July,

Lynn, Pa., December, 1857. G. C. L.

FATTENING CATTLE IN WINTER.

Fattening cattle is carried on to some extent in this section. Nearly every farmer feeds some cattle for the markets, besides his stock which he generally keeps; they are mostly bought in autumn from drovers from the Western States. It should be done by every farmer to the extent that he is able to provide for them. Barn-yard manure is the only material with which we can enrich our fields, or it is at least the cheapest and the best; for without it we could not long obtain bread from our land.—One that has had any experience in fattening cattle, knows that to feed them well, giving them the best, and as much as they want, is the only way of making good fat beef. Feeding should commence as soon as the grass falls short. They should be fed with bran and shorts mixed, by the middle of October at the latest, twice a day, till the new corn is harvested. Then corn on the cob, cut up in small pieces, may be given till it gets dry enough to be shelled; then mix with mill feed, at the rate of two bushels of corn to one of mill feed, and give it to them evening and morning, as much as they can eat well—never more. A little wheat chaff is also of much benefit for feeding to cattle. Put a little in the trough and then the other feed on top, with a little salt every time you feed them. Hay should be given to them as much as they want to eat. They should be kept in the open air four or five hours during the day, and have plenty of water. Fresh lime proves to be very healthy, and can be given once a week about a table spoonful mixed in the feed, and some should be kept always under their feet. This prevents them from getting lame, and keeps their hoofs sound and healthy.—Bed well with straw and keep them clean and neat. A curry-comb should be used freely on them every morning. It will make them tamer, and they will also fatten better and look neater.

Enterprise, Lancaster Co., Pa.

STONE FENCES.

A properly constructed stone fence is, perhaps, on the whole the best that can readily be built, for general farm purposes, being efficient and durable. But on most land, and particularly that which is wet, ten to fifteen years suffices to tumble them down so badly that they require relaying. Whereas on dry land not subject to be upheaved by frost a good wall will stand fifty and perhaps one hundred years without relaying. The water in the earth under and around the wall freezes and elevates it, but thaws out unevenly and lets the wall jostle around and in a few years throws it down. Now if the water can be kept away from the bottom of the wall, the upheaval will be prevented and the wall remain solid. Several in my neighborhood have tried banking earth on each side of the wall, but it seems to do little good, while it lessens the value of the wall as a fence by decreasing its relative height.

Observation has led me to the conclusion that the best way to make a wall is to dig a trench from two to three feet deep, immediately where the wall is to stand, taking care that there are proper outlets at all the lowest points. Let the ditch be as wide as the bottom of the wall is to be. Fill it with small stones even with the surface of the earth. Upon these, place the largest stones that are to go into the wall, if rocks as big as two teams can haul, so much the better. If they project a little on each side, no harm done. Then if the stones that are to go into the wall are generally large, lay the bottom two feet six inches; if small, two feet in width, narrowing it gradually to one foot in width at the top.—Lay the stones horizontally or level, and you have got a wall that won't fall down in your life time.—I know a wall so laid thirty years ago and it is as plump and true to-day as when laid. Besides the land in the immediate neighborhood of the drain is dryer and better for it.

A four feet wall will usually stop horses, cattle and hogs, but it takes about as good a wall to stop sheep as it does horse thieves. Some lay broad flat stones on the top of the wall letting them project six inches on each side, others set stones on end on the top of the wall, but neither will stop a sheep that has learned the art of jumping. Others put square timbers on the wall and nail short pickets on the timber. This makes a neat fence but is too costly for general use. Perhaps as good a way as any, is to take pieces of wood about four feet in length with two inch auger holes in each end, put these across the wall about half way up, and within sixteen inches of the length of a rail apart. Set stakes in the holes and put on one or two riders as may be found necessary. Often a little timely precaution of this kind will keep a flock of sheep from getting so intolerably unruly that nothing but the butcher's knife will stop them.

G. C. L.

Lynn, Susq. Co., Pa., 1857.

CULTIVATION OF SWEET POTATOES.

In a warm climate where the winters are mild there is but little difficulty either in cultivating or preserving sweet potatoes, but in our northern latitudes the case is different, and though the cultivation may not be very difficult, it is not so easy to preserve them through the winter. I have found the most economical and in fact the best way to prepare the seed for planting is to prepare a hot bed in which to sprout them. The better way, I think to make the hot bed is to build a pen of logs or plank about a foot each way larger than you want the bed and about three feet high; if possible have it sheltered from the north winds by a building or a board fence. Fill the pen with good fresh stable manure, packing it down so that there will at least be six inches to be filled with good rich well pulverized mould. The potatoes should be planted tolerably close, but not touching each other and should be covered with earth or, what is better, earth and sand, in equal quantities, two inches in depth; the bed should be covered with boards at night while there is any danger of frost and watered every few days. I generally put my seed in the bed about the first of April.

The land intended for this crop should be plowed and harrowed early, and when the sprouts are large enough to transplant, being from two to three inches high, it should be cross-plowed and harrowed well, and then thrown into ridges by turning four furrows together; with a hoe make the ridge smooth and it is ready for planting. The sprouts should be carefully drawn from the bed and immediately planted in the ridges, two together, every two feet apart, pressing the earth firmly to the roots. If the ground is a little wet there will be no difficulty about their

growing, but if dry they should be watered in the evening after setting. The plow and hoe must be used whenever necessary to keep them clean; when the vines run, they should be carefully laid over, out of the way of the plow and replaced when the row is plowed. The last time of working, the earth should be well thrown up, making good large ridges. The best implement I have yet found to dig the potatoes, is a one horse plow, throwing out a furrow each side of the ridge and then, by a third furrow, turning them out beautifully, so that they can be picked up with little trouble. Before putting them away for winter, I think it best to let them lay in a heap under shelter, where they soon sweat and after this they are not so liable to rot.—Many ways are practised for preserving the potatoes through winter. When few are to be kept, a box of thick planks placed in a warm cellar will answer, and by putting a layer of dry sand and a layer of potatoes until full, and then covering tight they keep very well; but when a large quantity are to be kept, choose a situation at the south side of a building and raise the earth where the potatoes are to be deposited; on this, place the potatoes in a neat pile, and cover quite thickly with corn husks, say one foot thick, then cover well with earth; over the heap build a shed and when the ground begins to freeze, place corn stalks over and around it, and there is but little danger that they will be injured. The earth being taken up round the heap forms a trench, thereby preventing any wet soaking into them.

Pin Oak, Warren Co., Mo. W. D M.

CULTIVATION OF EARLY POTATOES.

It is not very difficult to raise good Potatoes, in a moderately dry season, on properly prepared soil that is adapted to their culture; there are few soils, however, on which potatoes cannot be raised to good advantage, if not with profit. Potatoes will grow better on dry hill land that is of the right mold, than on the "flats," of sand, or gravel with the same treatment, but it will not pay to plant them on soil that is very wet.

In order to raise early potatoes it is necessary to have the ground well prepared,—if wet, it should be thoroughly drained, and well plowed in the fall; if sod ground, plow early; if tough sod, give a good coating of ashes before plowing to facilitate the rotting of the sod.

The great advantage of plowing in the fall, is, that it can be worked and planted earlier in the spring.

As soon in the spring as the ground is sufficiently dry and warm to put in the potatoes, commence operations by manuring the ground well, by drawing on at the rate of thirty loads to the acre, of fine barnyard manure, and spreading it evenly over the ground, then drag thoroughly till the manure is well mixed with the soil, and the ground is mellow; and then mark with a chain, or what is better, a light marker,—about two feet and a half apart each way, and the ground is ready to plant.

I select seed after this manner: in the fall when I dig the Potatoes, I take to the field several empty barrels to put them into. I then proceed to digging; after digging enough to fill the waggon, or what can be picked up and properly secured before night, I take my small basket or pail, and proceed to pick up the potatoes to be saved for seed, by passing over the rows and selecting only those that are perfect, avoiding all such as have secondary sprouts, and those affected with the rot. Being particular to select all of about the same size, sufficiently large to plant one in a hill, usually about the size of a small hens egg, and putting them into the barrels. I take them to a warm dry cellar, and keep them in the barrels till spring, in which also they are again taken to the field, and the seed is not tumbled about a half dozen times, which I consider a detriment to its early growth.

Having prepared the ground in the spring as before directed, draw out the barrels of seed and place them along side of the piece; let one man take the basket and proceed with two rows at a time, and drop the Potatoes, one in each hill where the marks cross; let another take a pail of plaster, and drop at the rate of about half a table spoonful of plaster, on the potato in each hill, and let another follow with the hoe, and cover the potatoes about two inches deep.

By placing the plaster in the hill with the potato it gets the benefit of the plaster at the start, and by covering lightly, the warmth of the sun reaches the potatoes more readily, than when covered deep.—These two considerations are of much importance in securing early potatoes. One thing more, I would recommend about seed, and that is, by all means keep the varieties separate, as a matter of convenience and of profit. If there are different varieties to plant in the same field, commence by taking the earliest variety, and plant just so many rows, or rods, as you wish of that variety, and so of the next early variety, until the ground is all planted.

By using seed of uniform size, and covering according to the directions, it will all come up at the same time, and there will be no need of waiting three or four days, or a week, for the hills to come up that were planted with small indifferent Potatoes.

As soon as they are up, so the rows are plainly seen, plow them out one way, two furrows in a row. If any hills get covered, stop and uncover them,—wait a week or ten days, and plow out the other way, two furrows in a row, and dress them out nicely with the hoe. All that is neccessary after this, is to go through them and cut or pull out the weeds, if there should be any, and perhaps stir the ground a little.

I have planted potatoes after this method, for several years with good success; and here I would make a statement as a test, somewhat, of this plan of raising potatoes.

One of my neighbors, whose land joins mine, planted his potatoes according to his own plan.—The ground that he planted—the same kind of soil as that I planted; the kind of Potatoes were the same; he manured his as I did; I plastered mine in the hill, he plastered his after they were up; I planted on the top of the ground, he furrowed his with the plow, and planted in the furrow; mine were planted about two weeks first. I dug for him one day, he dug for me one day; his piece was a little more than twice, the size of mine. Now for the result. He got fifty bushels, I got forty; of sorted potatoes, he got thirty, I got thirty; of rotten Potatoes, he had from a bushel to a bushel and a half, I got as I estimated, from twenty to twenty-five; my sorted potatoes were better than his, as I selected my seed, as described above; he also allowed that

it was not more than half the work to dig mine that it was his; mine were up in the hill, his were down in the ground, and we had to dig nearly a foot into the ground for some of them at that.—The difference in the two crops is owing in the first place, to the manner in which they were planted; in the next place, to the time of planting—as mine were planted earlier than his, they had more time to grow before the rot struck them.

As the present season has been very wet with us, early planted potatoes have rotted badly, and late potatoes did not get their growth, as the rot took them at the same time. There are seasons when potatoes are almost a failure, either by the rot, or extreme drouth. This season, there are several fields about here that will not yield the seed that was planted. Yet over these calamities we have no control, although we may cultivate well. This is a lesson we should remember: although Paul may plant and Apollos water, yet God gives the increase.

Walton, Del., Co., N. Y. E. .H

PLANTING TREES BY THE ROADSIDE.

Plant trees by the roadside and any where else that you have a waste foot of ground. They will not only be useful, but will add greatly to the beauty of the country scenery. How beautiful they looked this autum by the roadside, in the pastures and the forests, as they stood in the warm October sunshine with their rich fall dresses of crimson and gold. Some, to be sure, were dressed in russet brown but this only added to the charms of the picture. The forests were so deeply and richly colored, this autumn, that they reminded one of the descriptions given of the pictures by the old painters. We can not do without trees; our land would be a desert without them. The farmer says, "I can not afford to plant trees; it does not pay; they take up too much ground; and they will never do me any good." What if they are of no benefit to you, what right have you to rob your country of its noble forest trees, and to do nothing towards replenishing them? But you are not certain it will not benefit you. If you wish to sell your farm, you will be able to dispose of it much more readily and to greater advantage if the roadsides are judiciously planted with beautiful trees of various kinds, than if nothing can be seen but wild fields, dusty roads, and old rail fences. I do not advocate planting trees promiscuously over the farm, in the cultivated fields, but wherever brooks and gullies cross, and in all situations not available for purposes of cultivation, where trees will flourish, I would say, plant them and tend them with care, and you will be made glad as they grow and lift up their green heads in beauty; your children, as they grow up will thank you for planting them; the birds, as they return in spring, and build their nests in their branches, will sing you songs of thankfulness; the cattle, as they retreat from the scorching rays of the summer sun to shelter themselves beneath their spreading branches, will be grateful for the cool shade. If you should leave your home, and be gone many years, and return to see what beautiful objects they had grown to be, I am sure you would be glad that your hand had planted them.

First in utility and beauty for shade trees, are the Maples; their wood is valuable for fuel and timber, and they form such beautiful heads of dense green foliage, and are so richly colored by the frosts of autumn, and last, though not least, yield such quantities of sweet sap, that they should be planted plentifully. The Ash, with its tall, straight stem and fine head, is good timber and should be planted. The Elm, with its wide spread arching branches and pendant limbs, swaying in the lightest breeze of summer, is a beautiful object in any landscape.—The Linden, or Basswood, with its round head and broad quaker leaves is a fine tree. Then there are the Oak, the Beech, the Hickory, the Chestnut, and the Blackwalnut all useful and beautiful trees, each of which should receive a share of attention.—Evergreens for winter scenery should also be considered. The Fir, with its straight tapering spire of dense, dark green foliage, is a splendid object. The Pine, with its graceful top; and the despised though useful Hemlock, should all be planted for usefulness, and to vary and embellish the landscape.

Java Village, Wyoming Co. N.Y. A. J. TAYLOR.

CULTIVATION OF STANDARD PEARS.

An elderly farmer of Dorchester, Mass., who had planted a large apple orchard and seen it bear luxuriently, observed to the writer, that if he ever planted another orchard, it should be of pears. "For," added he, "when apple trees bear heavily, the fruit is a drug in the market, and brings but $1.50 per bbl.; whereas, pears would bring from $10 to $20 per bbl., with no more labor in picking."

I thought there was much truth in the remark, and had I enough of the proper land, I would act upon the suggestion—though good apple orchards should by no means be neglected.

As to the profits of pears, nothing need be said to those who live near a city or thriving village; and the only question is, how far a farmer must be exiled in the wilderness to make pear culture unprofitable? We can imagine some such recluses; but when an orchard now set shall be in a full bearing state it might no longer stand in the wilderness, for railroads, the greatest artificial blessing to farmers, are ramifying the new countries that they bring—almost every morning—the older cities and the newer farming districts into commercial proximity.

In cultivating the standard pear for market, I should plant an acre—if I had sufficient land—and would prefer a strong upland soil, inclined to the south or west. If I could not get this, I would trench the low land so that the roots would be free from excessive moisture—thereby giving a better maturing power to the soil, and enabling the fertilizing agents to permeate among and beneath the roots. The lot should be deeply plowed and highly cultivated for root crops one or two years previous to setting the trees, which latter should be done in the spring, and perhaps not more than fifteen feet apart each way—giving to the acre 193 trees. I should train them as pyramids, keeping the lowest branches within two or three feet of the ground. Care should be taken to keep the land in a fertile state, and root crops for a number of years could be grown in the intermediate spaces. The time when all the resources of the land should be devoted to the trees, judgment should dictate. After the trees begin to bear heavily, some special manuring might be requisite, but, generally speaking, the best *mineral* manures are the hoe and the cultivator.

The varieties of pears selected should be those known to do well on their own roots—with a liberal share of the later kinds. The Bartlett, Heathcot, Fulton, Louise Bonne de Jersey, Flemish Beauty, Belle Lucrative, Vicar of Winkfield, Seckel, Maria Louise, Washington, Swan's Orange, Winter Nellis, and Lawrence, would be among the number I would plant in Massachusetts, though position and climate should be considered.

By properly cultivating this area of choice pear trees, can any one harbor a thought that it would not constitute the most valuable acre a farmer could possess? Would not his children bless him for it? And could he not feel as just and equal pride in this living monument of his wisdom and industry, as if in his country's cause he had won by his valor the most coveted laurels that could be bestowed.

West Medford, Mass., Nov. 1857. D. W. L.

CULTIVATION OF CRANBERRIES.

The cranberry plot may be a peat swamp, a muck swamp, or indeed almost any kind of low land, unless it is too cold, which is not often the case. If it is a piece which can be easily flowed it will be a great deal better, because the vines and fruit may thus be easily protected from the frost, and the ravages of the worm will be effectually prevented.

These difficulties, which are so completely overcome by flowing, are the principal obstacles in the way of raising cranberries upon upland. But the fact that small natural patches are sometimes found flourishing upon upland, warrants the belief that even there they may, with proper attention, be made a remunerative crop. The low lands are, however, without doubt the best.

In preparing the bed, if there are any places in which the water will stand and stagnate, first drain them; next take off the turf, or if a good supply of sand is convenient, it will do well to cover the grass with a coating of it from three to six inches in depth. For this purpose, no doubt fine beach sand is best, but any fine clear sand will answer. When the sod is taken off from a peat swamp, it should be exposed to the action of the frost one winter, before the vines are planted, or the soil will cake and thus kill them. Excellent cranberries have been raised by digging the muck all off from a swamp, and upon the bottom of hard pan, sowing the berries and covering with a thin coating of fresh loam.

Having prepared the ground, select such vines as are known to be good bearers; separate them, and set them up carefully. If the soil is well prepared, this will be easily done, and the thicker they are set, the sooner will they become matted. Another very good and much easier way is to mow the vines, pass them through a haycutter, sow them broadcast, and rake or harrow them in. They are very tenacious of life, and, sown in this manner, will sprout from each joint, and in a short time cover the whole ground.

When the fruit is gathered in Autumn, the plot should be flowed, and the water allowed to remain upon them in spring till they are safe from injury by frost. The water should then be drawn a little below the surface and allowed to remain through the season. The berries should be picked, not raked, for the rake injures both vine and fruit. X.

TRANSPLANTING EVERGREENS.

No careful gardener probably finds much difficulty in transplanting evergreens from one part of his grounds to another; for he will keep attached to the roots as much earth as possible, which generally is sufficient, (when they have been standing in soil rich enough to tempt numerous fibres) to sustain them at almost any season of the year—though I should prefer June. So in regard to bringing them from the nursery—the more earth which can be taken up, the less particular we need be in the time of setting.

But I propose to speak of transplanting evergreens *under disadvantages.* The most difficult of these I find to be the Hemlock, taken from the forest. About a year ago (in November,) I was anxious to procure a few dozen of these trees for my own grounds and knowing where there was a lot of them in the woods, free to any one who would go after them, I procured some assistance and set out for them. I took this season because it was convenient—not intending to set them out till spring, but to keep them in the cellar.

In taking up these hemlocks it would, of course, be well to take up as much earth as possible; but there is hardly none, for the ground is generally rocky, and the roots extend at great length just under the accumulation of leaves, and hardly penetrate the soil, except in exposed situations. I carefully pulled up about thirty of these trees, of sizes from one foot high to six, and placed them in the corner of my cellar and covered their roots with good loam. I reasoned thus: If the winter kills these trees as asserted, when planted late, I will keep mine warm in the cellar till spring. In April of this year I set them, and occasionally watered them, but on the seventeenth of June there were but three or four which promised to live! On this day I procured about as many more, which had started *nearly half an inch*, and in August nearly half of them were alive. I fancied this a success. During the dampest portion of this month I procured more, but lost about two thirds of them.

The question may well be asked, why is it that evergreens are more difficult to make live in transplanting than most other trees? If we expose their roots to the air, they very soon dry up, and if we plant them early in the spring, the high winds shake them and frequently rob them of their vitality.—We know that a stick of pine wood will dry sooner than one of oak or maple, or the trunk of an apple tree. Does the volatile character of their turpentine destroy the evergreens? It is said that in these trees the epiderm is is mostly resinous, and this circumstance would seem to preserve them from any escape of vital fluid. Yet it does seem to be a fact that they are more liable to dry up than other trees. Is it because they are transplanted with their foliage, and that the sap evaporates through it before their roots take hold to draw necessary nourishment. I am inclined to the latter belief, though with care they may be made to live. Some chemist or physiologist should analyze the evergreen, and show us how it is distinguished from the deciduous tree in sap and foliage—or how it lives and dies.

But dispensing with theory, I believe facts abundantly show, that about the first of June is the best time to plant evergreens, where there is but little or no soil retained on their roots, and that they

should be well mulched and frequently watered.—In taking young hemlocks from the woods in the spring, it would be much safer to *plant them in the shade for the first year*, and then transplant with a ball of earth to their destined places. All feeble branches should be cut off. Arbor vitæ taken from the forest deserves the same care as the hemlock.—White pines will live with ordinary care. Evergreens which have been well rooted in a rich soil, (as before intimated) can be far more easily transplanted than others, even without the ball of earth, from the presence of their numerous fibres.

This subject interests me much, and I intend to make further experiments. D. W. L.

W. Medford Mass., Nov. 1857.

CULTIVATION OF PLUMS.

The culture of the Plum has received but a meagre share of the attention it merits. The Plum is by no means difficult to propagate; it comes early to maturity, and is very prolific. At every stage of its growth it is an interesting tree, and while in fruit, is extremely beautiful. It is also very hardy, and has but two or three drawbacks—however serious they be—to its general cultivation.

The Horse Plum is said to make the best stocks on which to work the good kinds, but they are doubtless most easily propagated on the suckers of the Canada stock, *Prunus Americana*. This species is widely scattered over the country. In New England, where it does not grow wild, it is very frequently met with, in a state of neglected cultivation by the side of old walls. These suckers should be grafted at or below the surface of the ground. If well cultivated, they will commence bearing the third year, and continue vigorous and productive trees for several years. I am aware that the practice of working trees on suckers, is in general a bad one, very justly unpopular; but if any one doubts the success of the plum in the manner described, let him try it.

Select a moist, rich loam, on an elevated position, though vallies will answer a tolerable purpose. The plum is more hardy than the peach, but in frosty places its fruit buds will occasionally be killed.—Work the land deep, and manure highly with stable manure, wood ashes, peat, chip, dung, etc., using some salt. The ashes should never come in direct contact with the stable manure, as it wastes the ammonia. By thorough working and high manuring, even dry soils may be made to answer a very good purpose. Set vigorous yearling trees, and if they are on Canada stocks, twelve or fifteen feet is a sufficient distance apart. Cultivate well and manure yearly, keeping the ground free from weeds and grass. Shorten back all luxurious growths from one-half to two-thirds. This causes fruit spurs to shoot out near the base of the shoot.

The Curculio.—A few days after the flowering, when the fruit has burst off the calyx of the flower, which adheres for a time, comes the tug of war.—The curculio is perhaps the most insidious and destructive pest with which the cultivator has to contend. Various remedies, more or less successful, have been proposed, but jarring is the only sure one. This should be performed unremittingly. If it is neglected for a single day, the fruit may be greatly injured or spoiled.

The operation should be performed in the morning, when the insect is still. The insect is quite sensitive to cold, and a slight concussion brings it to the ground. Prepare two sheets, which, when placed side by side, will form a square large enough to extend under the whole circumference of the tree. Sew rods in each end of the sheets, like window curtains. This greatly facilitates moving the sheets and adjusting them to the tree. Strike the tree a smart blow with the hand, or a muffled mallet. The hand answers a poor purpose, unless applied to small trees or the limbs of large ones.—Perhaps the best method is to saw a limb from the tree, and strike the stump of it. The limb should be cut in the fall, as it will season and remain sound longer. Large limbs can also be conveniently jarred by placing a staff with a soft pad on the end against them, and striking the other with a mallet.

If the plum was planted in large orchards of an acre or more, and men constantly employed, I believe it could be made a paying investment. All small fruit, however, should be destroyed by pigs, geese, or by picking up by the hand. The jarring operation need not continue longer than the tenth or fifteenth of July. Some seasons, perhaps, it may be discontinued by the fourth. J. GRIFFITHS.

Sterling, Conn., Dec., 1857.

SHELTER FOR GARDENS.

The advantages to a garden, arising from shelter, are numerous, apparent, and great. Vegetation starts sooner, continues later, and is less influenced by sudden changes, and severe weather. In sheltered positions the ground and atmosphere are found to be several degrees warmer than in exposed situations. Often there is difference enough to ward off a late or early frost, which would otherwise do much damage. Many vegetables, fruits, and flowers, which would otherwise fail, succeed well with us if slightly protected. Boards, eight to twelve feet long, nailed end upward to cross bars on the north, west, and east sides of a garden, make good wind-breakers. I also like a double row of Hemlocks set very thick; they make good wind-breakers, and look fine. G. C. I.

Lynn, Susq. Co., Pa., 1857.

MAKING AND PACKING DOWN BUTTER FOR WINTER USE.

The milk, when strained, should stand until the cream rises—from 24 to 36 hours—then skim and bring to a proper temperature, which practice will soon teach. In churning gather well and work the particles of milk from the butter before salting.—Use no water in this process. Salt to suit your fancy. Let it dissolve for the space of about 12 hours, then work it again. It is now fit for packing. The vessel should be stone. Sprinkle a little salt in the bottom. Then pack your butter as solid as possible. If the sprinkling of salt is repeated between each layer, it is more convenient to cut when used.

Butter prepared in this manner, has been preferred by competent judges, and will keep sweet and good, with but little expense and trouble.

A FARMER'S DAUGHTER.

Merrittville, Canada West.

WHY FARMERS' WIVES AND DAUGHTERS SHOULD WRITE FOR THE GENESEE FARMER.

1st. It is an acknowledged duty that every person owes to the society in which he lives, as a general rule, to impart any useful knowledge that he may possess, and in no way can this better be done than through the *Genesee Farmer*.

2d. The articles of female contributors would naturally invite female readers, and thereby exert an influence in a class, among whom it has not hitherto been felt. In agricultural reading, men and women's tastes of necessity differ, notwithstanding their interests are the same. Men alone contributing could not fully supply the wants in our department; neither could they expect us to instruct them concerning the best breeds of stock, or the best mode of increasing, preserving and applying manure; or the study of the different soils; and the culture of the different grains and grasses, and selection of the kinds best adapted to those soils. I will here acknowledge my indebtedness to the pages of the *Farmer* for the valuable hints on butter making, I read there this present year, which, having thoroughly tested, could not now do without, though I for years have had the reputation of being a good butter maker.

3rd. The success of the *Genesee Farmer* would be promoted. Women aiding in increasing its interest, usefulness, and circulation, would give to it a greater impetus—which all its readers must think desirable. Feeling a self-interest, by being themselves connected with it, would influence and awaken an interest in its behalf among others, not otherwise reached, and their co-operation would tend to increase its value, by giving greater variety to its pages, multiplying its subjects, and thus reaching and satisfying all tastes and wants, and thereby assisting in extending its circulation. Whenever women engage in any enterprise, it is with such hearty good will, with such determination to overcome obstacles, and fortitude to endure difficulties, that their influence is admitted by all to be powerful in effecting the intended result.

What is the object of the *Genesee Farmer?*

It plainly exhibits its motive upon every page. It is to enlighten the mind of the farmer—to encourage him in his useful and noble avocation, by giving him the result of practical experence and close observation.

As the motive of the *Farmer* is to diffuse useful knowledge for the benefit of the farming community, upon whom the nation's wealth and welfare so much depend, is it not desirable that farmers' wives and daughters should alike be benefitted? They surely have a work in common with men; and upon their understanding and discharging this work, rests much of the success and happiness of life.

Hence we conclude, that to enable them to perform all their operations judiciously and systematically, they, like men, need the same assistance and encouragement which can be derived from no other source as well as from "The Practical and Scientific Farmers' Own Paper." M. C. L.

Milton Center, Saratoga Co., N. Y.

AGRICULTURE, though in general capable of being reduced to simple principles, requires on the whole a greater variety of knowledge than any other art.

ON THE MANUFACTURE OF VINEGAR.

The strength of the vinegar depends on the quanty of saccharine or other principle capable of the acetous fermentation. The strongest vinegar we consider the cheapest and best. Take a clean cask, fill it half full of "hard" cider drawn clear from the sediment, for remember, that cider left standing on its lees seldom or never passes through the acetous fermentation, but becomes what is called "dead." Add to this a small piece of "mother" or vinegar plant; let it stand in a warm room till spring. This of itself will make a good article. In the spring take one and a quarter pounds of good sugar (maple is best) to each gallon of soft water, sufficient to fill the cask—or what is better still, take good maple sap, boil seven gallons to one of cider, and fill the cask; put it in when cold. The cider and sap or sugar as above will make a stronger and better flavored article than any other I have ever known. It will take two years to ripen, but I think none who try it will ever regret the cost or time.

Marathon, N. Y. Nov 80, 1857. CELIA M. QUINN.

CHEESE FROM FEW COWS.

THE common practice, in small dairies, is to keep the curd on hand until there is enough to make a cheese, when all is pressed together, but the curd often sours, in warm weather, in this way, which injures the cheese.

My method is put the curd into the hoop and press it lightly, until the following morning, then take it from the press and after shaving off the upper surface, put the cheese into the hot whey, whence the morning's curd has just been taken. The pieces which have been trimmed from the cheese should be cut fine, put into a bowl, and some hot whey poured upon them. After remaining thus a short time, or until the morning's curd is ready, take the cheese and put it into the hoop with the cut surface uppermost, and put the new curd on top, with the pieces from the bowl in the centre, and press as before. If but few cows are kept, and the cheese is not yet large enough, proceed again the next morning in the same manner.

Newfane, Niagara Co., N. Y. MRS. S. M. WILSON.

WHAT ARE THE DUTIES OF A FARMER'S WIFE?

They are much too numerous to mention. The following are some of the most important: To study and practice a proper economy in all her domestic affairs; to take into consideration the comfort of herself and family in preference to "what will people say;" to abstain from following many of the fashions of the present day; to abstain from attending Woman's Rights conventions; to keep in her proper sphere and exercise judiciously the mighty influence she possesses; to teach her daughters that it is more important to understand making butter and cheese, than it is to understand music and dancing; to teach all her children the obligations they owe to their Creator, to their parents, and to society; to endeavor to diffuse gladness and kindly feelings about her by good ex-amples and her cheerful countenance; and, last of all, to write an occasional essay for the *Genesee Farmer*.

A FARMER'S WIFE.

Schoharie Co., N. Y. Nov. 18th, 1857.

IN "MY NEW GARDEN."—No. 5.

At last, a morning of sunshine. I am tempted to ask you again to walk with me, for some things in "my new garden" have received little notice. Failures ought to be reported as well as successes, though they are far less pleasant to speak of, yet the lessons they teach are often as important. One thing I failed in was in raising

Sugar Beet Seed.—Last season I grew a small patch of white sugar beets, and found them first rate, both for cooking and feeding to my cows. So I thought to raise seed for myself this year. Several of the finest specimens were planted early in spring and grew well—but the trouble was they *kept on* growing until the frost came without maturing seed. Some of the stalks were flat; over an inch wide, quarter of an inch thick; something I never observed before. I never have failed in getting seed from beets until now, why then this time? Shall we lay it to the wet season?

White Carrot Seed—secceeded well, though there was not as fair a ripening of the seed as some seasons. Treated the same as the beets—soil gravelly loam.

"Patent Office Seeds."—The only new ones tried this year, were the *Sorgham*, spoken of heretofore, and the "*White Fowering Marsh Beans*, (from England)." These grew for a while, then most of them turned black in spots, and but few beans were produced though they *flowered* profusely. I set them down as not suited to our climate—or that they required peculiar treatment, which I knew nothing about.

Cauliflowers.—I have to confess no failure in *growing* fair cauliflowers, but did fail in getting them cooked and eaten. *I* found them very much to *my* liking, but they were in season so short a time that I could only dispose of a few—the remainder grew on till spoiled for the table. I shall try a *few* next year, for they are one of the finest *flowers* of the kitchen garden. They need special manuring and attention while heading to secure large heads.

Lima Beans.—Many failed in getting ripe Lima's this year, but I grew a fine parcel of seed, as well as a good many green beans for cooking, and the frost to cut off. Plant early and carefully, cultivate thoroughly, and on a suitable soil one can hardly fail of a crop.

Celery.—There has been so much rain lately I have done nothing more to my celery—in fact, I dont know how to manage it. I thought the stalks were of a longer habit of growth—mine are scarcely six inches high—but thrifty and still growing.

The wind blows chilly Mr. Editor, this 19th of November, let us come in from garden rambling.

Your Rural Annual for 1858—lies on my table and I have read it with much interest. The first article on "*Manures for the Orchard and Garden*," is worth all you ask for the whole volume, for it *posts one up* on the "Manure Question"—in regard to all the latest discoveries. I profess to know something of what science teaches on this subject, as well as to have had some practical experience on the farm, but I learn something new from your essay as well as find it a brief and convenient review of the whole subject. "*Profitable Fruit Culture*" is well argued by Mr. Hooker; the "*Birds Useful and Injurious*" are pleasingly and instructively written of by Mr. Bement; while Mr. Salter gives us one of his truly practical essays on the "*Cultivation of the Grape*"—a subject of interest to every one with a rod of land to call his own. "*Rural Architecture*" is illustrated by some well arranged models of different styles from Mr. Forsyth, and several briefer notices fill out this valuable little volume—one I shall gladly refer to as reliable on all the questions it discusses. A Country Invalid.

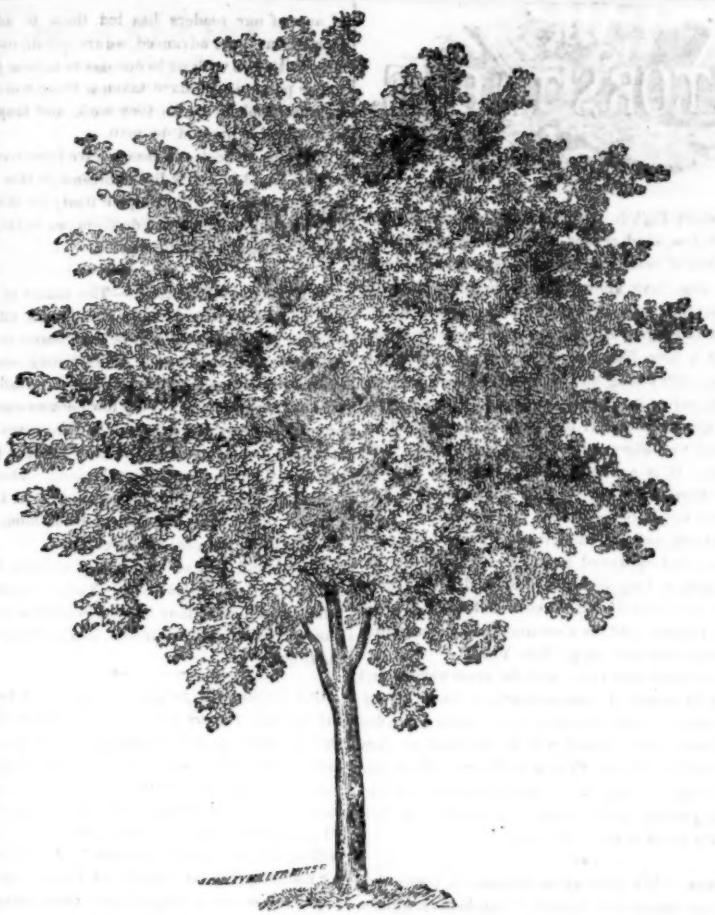
Maple Hill, N. Y.

THE NORWAY MAPLE.

The genus *Acer*, or Maple, composes almost entirely the natural order *Aceraceæ*, and comprehends upwards of twenty hardy species, besides a great number too tender to endure the rigors of our Northern climate. Some of our cultivated species consist of distinct and interesting varieties. Two or three of the species attain the full size of timber trees, and the growth of the others ranges from that of trees of a medium size down to the stature of shrubs.—The whole genus is remarkably handsome. Some of the species grow rapidly at an early age, in almost any soil, yielding fine green, smooth shoots. Many kinds are interesting on account of their flowering early—at the time of the expansion of the foliage; and from their elegantly-lobed leaves, of the finest texture, which in autumn furnish the most exquisite tints of every shade of yellow and scarlet, they are much esteemed in ornamental plantations. Two species, the Silver Leaved and Sugar Maples, are more extensively planted as shade trees in this country, than perhaps any two others.

The largest species of the Maple is the European Sycamore, (not the Sycamore or Button-wood of this country.) Under the erroneous supposition that it was the tree on which Zaccheus climbed to see Jesus on his way to Jerusalem, the Sycamore was extensively planted by religious persons in Europe during the fourteenth and fifteenth centuries. It was introduced into Scotland about three hundred years ago, and generally marks the first spots of reclaimed land throughout the country. Up to the present time, few deciduous trees are found better adapted for standing singly in a rough and exposed situation. Regardless of the prevailing winds, it rises with a large and well balanced head—valuable in affording shelter for cattle.

The most remarkable Sycamores in Scotland are



NORWAY MAPLE, 20½ FT. HIGH, 7 IN. IN DIAMETER.

called *dool* or grief trees, from the fact that they were formerly used by the powerful barons for hanging their enemies and refractory vassals on.—There are three very large trees of this description still standing in Ayshire. One of these is a noble-looking, spreading tree, with a head above 190 feet in circumference. In its wide spread branches and luxuriant foliage, from twenty to thirty men could be easily concealed. Another of these trees is seventy-two feet high, with a trunk seventeen feet in circumference, ten feet from the ground. They are all in great health and vigor, and are probably about three hundred years old.

The Norway Maple (*Acer platanoides*, or Sycamore-like Maple,) is destined to be one of our most popular shade trees. It is already planted quite extensively, and the demand for it is yearly on the increase. Though not as ornamental as the Sugar Maple, it is nevertheless a handsome tree. Its foliage is very dense—of a fine form and texture, and of a glossy polish, which retains a lively green throughout the summer, and in autumn assumes various tints, in which yellow prevails. It is quite hardy, of exceedingly rapid growth when young, especially on deep, well-drained soils. A plant has been known to attain the height of twelve feet in three years from the seed, and when once established, it produces shoots from eighteen inches to three feet long every year, till it attains the height of from twenty to thirty feet, which, in favorable situations, it does in ten years. It will not flourish in wet land, though if dry, it prefers a low to a high situation.

In Germany, sugar is obtained from the sap of the Norway Maple. It contains less saccharine matter than the Sugar Maple, but more than the Sycamore. A tree yields about thirty-five quarts of sap in eight days, which, when evaporated down, furnishes about four pounds of syrup, the syrup containing about six per cent. of crystalized sugar.

On Its Twenty-Eighth Birthday, the *Genesee Farmer* stands before you, kind reader, in an entire new suit.—In the full blush of manhood, with thousands of staunch, old friends, who have known him from his youth up, pledged to support him in his efforts to represent the experience of intelligent American farmers, he feels justified, even at a time like the present, in incurring this extra expense; still young and vigorous, as well as prosperous and hopeful, he may be allowed to pay a little attention to appearances. If his dress is useful and becoming, no one can object to its being fashionable, clean and handsome. It is no holiday attire, but one adapted for earnest, every-day work. It will do good service in eradicating the weeds of ignorance and imposition from his extensive farm, and in scattering the seeds of experimental science and approved practice. Grateful for the generous support so long accorded him, and full of hope for the future, he sincerely wishes each and all of his host of old farmer friends, and his thousands of new acquaintances, "a prosperous and happy New Year."

With its new head, new type, and the great variety and excellence of its practical communications from experienced cultivators, in various parts of the continent, we feel assured that none of its friends will be ashamed to show this number of the *Genesee Farmer* to his neighbors, and ask them to help sustain the cheapest agricultural and horticultural journal in the world, by sending in their names and fifty cents to the publisher.

Prize Essays.—We have great pleasure in presenting our readers this month with Thirty Prize Essays, written for the *Genesee Farmer*, by some of the most experienced practical farmers and gardeners in the United States and Canada. These Essays alone are worth three times the cost of the volume, to any one interested in rural pursuits.

On some of the subjects a great many essays were received, and it has been no easy matter for the judges to decide which was the best. We believe they have exercised their delicate duties with strict impartiality. Probably many of the competitors will be disappointed in not receiving the Prize, but we have too high an opinion of their intelligence to suppose that they will be offended.

We hope every one of them will continue to favor us with their experience, not only on the subjects named in our Prize List, but on any other subject that may suggest itself to their minds. We rely mainly on our able corps of correspondents in our efforts to make the *Genesee Farmer* worthy of its extensive circulation.

To correct an impression to the contrary, we may be allowed to say that we must not be held responsible for every theory advanced or every practice recommended in these Prize Essays, any more than in ordinary communications. The *Genesee Farmer* is the "Practical and Scientific Farmer's *Own* Paper," and we allow our correspondents to express their views freely. If the experience of any of our readers has led them to adopt different views from those advanced, we are certain our correspondents will unite with us in our desire to hear from them.

The persons who have taken a Prize will please inform us what book or books they wish, and they shall be sent immediately, prepaid, by mail.

On some subjects, no essays have been received. These will be found in a new list published in this number. We hope our readers will compete freely for these premiums. The effort of writing will do them no harm, even if they do not succeed in taking a prize.

Our January Premiums.—The names of the successful competitors for the January Premiums for the greatest number of subscribers will be announced in the February number, and the prizes immediately sent. There are twelve Premiums, and a very small club will undoubtedly take the smallest one. Very few persons compete for these premiums. Any one who *tries*, will be sure of one of them. It is not necessary that the club be sent in all at once. Send on the names as fast as obtained. The time for competition for the January prizes expires on the 14th of this month. Read over the List of Premimus, and see what you can do to increase our circulation.

We should feel obliged if our western friends would send us, if convenient, New York, Canada, or Eastern bills. Small sums may be sent in gold or postage stamps. Money may be sent at our risk, *and you need not "register" the letters.*

Our friends will be glad to learn that the prospects of the *Genesee Farmer* were never better than at this time. Our receipts up to this date are more than *four times as large* as up to the same time last year. Thanks to our numerous correspondents, the "*Farmer*" last year gave great satisfaction; and though some of our agents complain of "hard times," yet few of our old subscribers are found willing to give up the "*Farmer*." Agricultural reading is a "necessity" to an intelligent farmer, and in no other paper can so much original and practicalagricultural and horticultural matter be obtained at the same price, and in a convenient a form to bind into a book for future reference.

Crowded Out.—We have an able article from Dr. Lee in type, which was intended for this number, but the Prize Essays have crowded it out. It shall appear next month. Many other excellent communications have to lie over for the same reason, among them one from our special correspondent, Josiah Salter, whose articles in the last volume have given such general saisfaction, and who will continue to write regularly for the "*Farmer*" during the present year.

The Guano Trade.—A convention is now assembled at Peru, for the purpose of devising means for the future management of the Guano trade. Hitherto there has been but one agent for Great Britain, and one for the United States. In 1854, there were imported into England 200,000 tons, and into the United States 163,000 tons. On this A. Gibbs & Son, of London, received $800,000, and Barreda Bros., of Baltimore, $650,000 commission. It is time this gigantic monopoly was broken up, and it behooves the farmers of England and the United States to use all their efforts, through their representatives, to indece the Peruvian Government to permit free trade in guano.

Premiums for Short Essays.

We will give a book (or books,) of the value of one dollar, for the best essay on each of the following subjects:

On the Best Method of Curing Timothy and other grasses for Hay;

On the Cultivation of Peppermint;

On the Cultivation of Liquorice;

On the Management of Woodland;

On the Use of Superphosphate of Lime as a Manure;

On the Best System of Rotation on a Clayey Farm:

On the Best System of Rotation on a Sandy Farm;

For the Best Essay detailing Experiments in the Use of Muck, applied Unmixed to the Soil;

On the Use of Muck in Composts, and as Litter for Stables and Yards;

On the Cultivation of the Chinese Sugar Cane;

On the Reclaiming and Management of Boggy Land;

On the Propriety of Farmers Supporting none but purely Agricultural Papers, *as such*; and is their publication Monthly often enough?

On the Best Method of Binding Wheat;

On Fattening Sheep in Winter;

For the Best Essay detailing Experiments in Feeding Cattle or Horses with Cut or Uncut Hay, Corn Stalks, and other Fodder;

On Irrigating Grass Land;

On the Advantages of Preparing Fire-wood in the Fall for Winter Use;

On the Best Plants for Hedges — their Management, &c.;

Which are the best Horses to wear — those fifteen or sixteen hands high?

Horticultural Subjects. — On the Cultivation of Dwarf Pears;

On the Cultivation of Grapes in the Open Air;

On the Cultivation of Hot House Grapes in Pots;

On the Cultivation of Melons;

On the Cultivation of Tomatoes;

On the Cultivation of Rhubarb;

On the Cultivation of Asparagus;

On the Cultivation of Cabbage and Cauliflowers;

What is the Cause of the Failure of so many Fruit Trees sent out by Nurserymen?

For the Ladies. — On the Best Method of Making and Preserving Feather Beds;

How can Farmers' Wives and Daughters induce their Husbands, Sons and Brothers, to be clean and neat in the House, in their Persons and Habits;

Is it Desirable for Farmers' Wives to Use Mangles for Smoothing Clothes; and if so, what is the Best Method of Making and Using them?

How can Mothers best instil into the Minds of their Daughters a love for Domestic Duties?

We also offer a *Rural Annual*, or any other work costing twenty-five cents for any Dozen of Original Domestic Receipts which the committee considers worthy of publication. (The printer is very anxious that the ladies should write only on one side of the paper.)

The Essays should not exceed one page of the *Genesee Farmer*—say six pages of foolscap—and must be received on or before the fifth of February so that they can appear in the March number.

We should esteem it a favor if our friends would write only on one side of the paper, but if they *must* write on both sides, it is absolutely necessary that they write only one essay on the same sheet. A neglect of this causes the committee great trouble.

The articles will be submitted to competent judges. — *Brevity will be considered as a mark of excellence.* We mean by brevity, not the omission of words necessary to make good grammar, but the expression of thoughts in as clear and concise a manner as possible. The prizes will be promptly announced, and the books immediately sent, pre-paid, by mail.

We should be glad if our readers would suggest other subjects.

Short-Horn Carrots. — A gentleman who has grown a quantity of Short-Horn Carrots the past season, informs us that they are not only the very best variety of carrots for the table, (which is generally conceded,) but that they are the best kind he has ever grown for horses. They are very solid; apparently contain less water than other varieties; and will yield, not a greater bulk, but more nutritious matter per acre, than the larger varieties. Horses, too, appear to like them better.

The Annual Meeting of the Western New York Fruit Growers' Society will be held in this city on the 6th and 7th of January. An unusually interesting meeting is expected.

Will the Gooseberry Take on the Currant? — A correspondent of the *Gardeners' Chronicle* says *it will not*, but that the currant will take on the gooseberry. Is it so?

It is estimated that the Poultry business of this country has reached the immense sum of thirty-seven millions of dollars per annum.

Value of the Genesee Farmer. — I must tell you how the *Farmer* has paid me the present year. Sometime last winter I had a cow that got lame in one of her hind feet. I supposed it was the hoof-ail; but she got lamer and lamer, until finally her foot and tail died entirely, and I had to kill her. This was an "unheard of" disease to me at that time; but afterwards I saw one or two accounts of the same thing in your paper, together with the best known manner of treating that troublesome disease.

Now, about two or three months ago, one of my oxen showed strong symptoms of the same disorder, to wit. — Severe lameness in one of his hind feet, with a slight kicking out and continual stepping back with that foot. — I at once applied the remedies given in the *Farmer*, and he recovered. The ox is worth about $75 — a sum that will pay for the *Genesee Farmer* at least five times as long as I shall live. Who says it don't pay? S. Jenkins, *Gwynedd, Penn., Dec.* 10, 1857.

Inquiries and Answers.

Best Soil and Manures for Roses. — (M. R.) Roses delight in a deep, stiff loam. In mucky, or black, porous soils, abounding in organic matter, the rose will rarely thrive without a liberal admixture of stiff loam, marl or clay. A dry subsoil is very essential. In clayey soils, with a wet subsoil, it is advantageous to put a quantity of loose stones or broken bricks beneath the tree. The Tea-Scented and China Roses should have a little sand and leaf-mould placed under them at starting. Well rotted hog manure, and next to that, ordinary well rotted farm-yard dung, are considered the best manures for roses. The drainage from dung heaps, or light soils, is found very beneficial. It should be very dilute.

DECAYED TREE.—(G. H. Y.) Remove as much of the decayed part as possible, and then fill the hollow with a mixture of equal parts cow-dung and clay made of the consistency of mortar with the drainings of the barn-yard. Make the surface smooth, and sprinkle it over with quick-lime, and when dry, paint it over with gas-tar, to exclude the wet.

YEAR BOOK OF AGRICULTURE.—(JOHN THOMAS.) But one volume of this book has appeared. The retail price, we believe, is $1.50. We have a few copies on hand which we will send you, postage paid, for $1 each.

MESSRS. EDITORS:—Will you or some of your experienced correspondents explain, through the *Farmer*, the cause of blight on carrots. Last year I had a fine-looking piece. I kept them clean. In July the tops commenced dying; and the result was, a failure. The soil on which they were sown is a sandy loam, well drained. WILLIAM STEELE.—*Humberstone, C. W.*

ARTESIAN WELL.—I have noticed something in the *Genesee Farmer* relating to Artesian Wells. Will you describe the apparatus used in boring them, and tell us why the term "Artesian" is used? M. GARNSEY, *East Cobleskill, Pa.*

Will some one answer the above?

MESSRS. EDITORS:—I wish you or some of your correspondents would tell us how to convert old leather into manure. It is rich in ammonia; but how can that be made available. G. C. L.—*Lynn, Pa.*

I WOULD like to know, through you or some of your correspondents, what crops do best after Buckwheat; or whether corn will do well after it? E. K. MCALLEY, *Patterville, Warren Co., New York.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

"EVERY BODY SHOULD HAVE A COPY."

THE

Rural Annual and Horticultural Directory

FOR 1858.

THIS work was started in 1856, by the publisher of the *Genesee Farmer*. Its great success affords conclusive evidence, not only of its intrinsic merit, but of its adaptability to the wants of the rural population. A new volume, prepared with great care and replete with new and valuable matter, is issued each year. The third volume, for 1858, has appeared, and is a book which cannot be too highly recommended—alike beautiful, interesting, and useful. The articles are all written expressly for its pages by men of experience. It is well illustrated with seventy-eight appropriate and beautiful engravings.

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During the past year, the circulation of the *Genesee Farmer* has nearly doubled. We believe it has now a larger list of subscribers than that of any similar journal in the world. This is mainly due to the voluntary efforts of the friends of Agricultural and Horticultural Improvement, who have kindly consented to act as agents, in procuring and forwarding the names of subscribers in their respective districts. To Postmasters, especially, we are under great obligations, for their disinterested labors in increasing the circulation of the *Farmer* and *Rural Annual*.

The *Genesee Farmer* is the only fifty cent agricultural paper in this country that is not made up from a weekly paper. It contains as much matter as any of the dollar monthlies, and much more than many of them. It has a larger and more extensive list of correspondents than any similar journal in the world. It is published in one of the finest agricultural and fruit growing sections in the United States, and we number among our correspondents many of the best practical farmers and gardeners in the country. The paper is not local in its character. No farmer nor fruit grower in any section of the Union, or in the adjoining Provinces, can read a single number without getting some hint that may prove valuable.

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do mess, per bbl.,	$9.00 @	$10.00					$10.00 @	$11.00				
Pork, per 100 lbs.,	6.50	7.50			5.25	6.75			4.75	5.50	10 50	13.00
do mess, per bbl.,	15.00	16.00			18.00		13.00	13.50	12.00	12.75		
Lard, per lb.,	.09	.13			.10	.11	.08	.09			.13	.17
Butter, do	.10	.20			.15	.16	.13	.20			.19	.20
Cheese, do	.06	.08			.07	.09	.10	.12			.11	.11
Flour, per bbl.,	4.40	7 50	$5.00 @	$6.50	4.75	6.25	4.00	4.50	4.00	5.00	7.20	7.20
Wheat, per bush.,	.97	1.45	1.12	1.30	1.00	1.20	.60	.70	.60	1.10	1.29	1.71
Corn, shelled, per bu.,	.56	.75	.50	.60	.60		.38	.44			1.02	1.05
Rye, do	.70	.76	.75				.45				.90	1.05
Oats, do	.35	.48	.33	.35	.30	.35	.21	.28	.25	.27	.60	.90
Barley, do	.65	.80			.50	.56	.30	.50			.96	1.35
Clover Seed, do	4.80	6.00	5.00	5.30	7.00	7.50	6.00					
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Hay, per ton,	10.00	13.00			8.00	11.00	5.00	9.85	9.00	16.00		
Wool, per lb.,												
Wood, hard, per cord,					4.50	5.50	5.00	5.50				

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